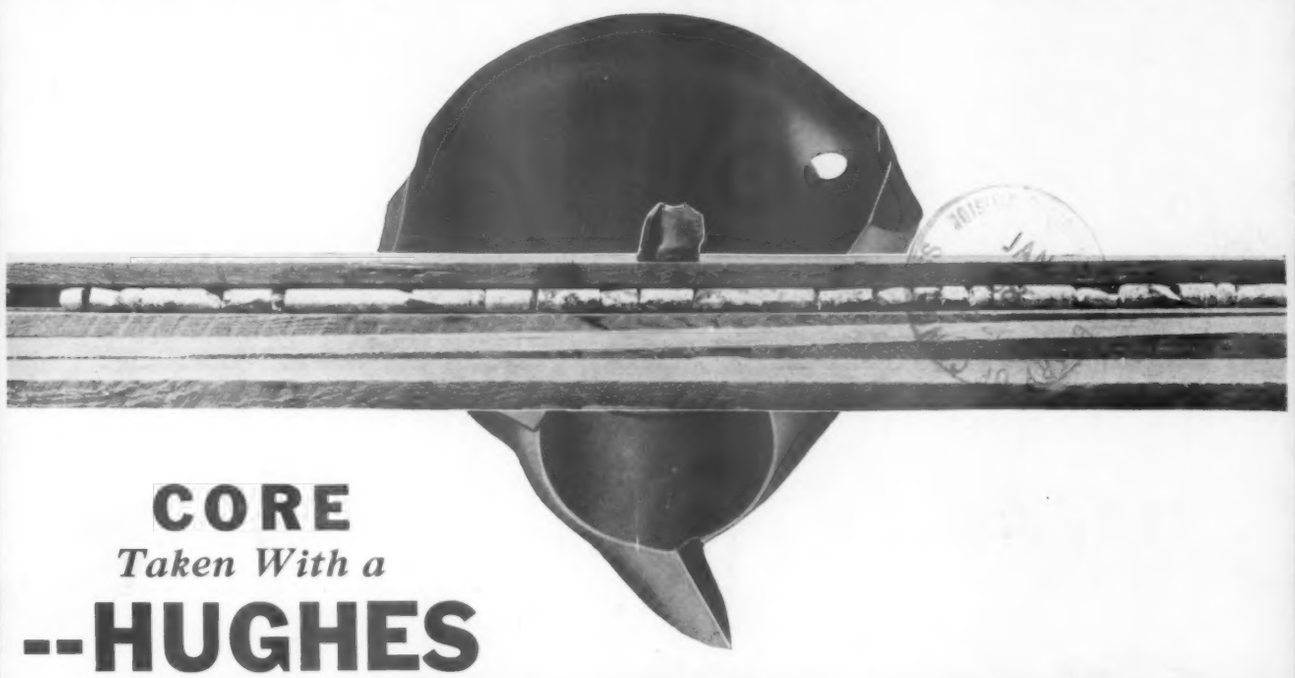
The OIL WEEKLY

10¢ A COPY

Exclusively Devoted To The Production and Transportation of Oil and Gas

November 9, 1928 **Volume 51. No. 8**



CORE
Taken With a
--HUGHES
SOFT FORMATION CORE BIT

The above core was taken in the Lockhart field. The formation was Austin Chalk. This is but one of many successful runs already recorded to this latest Hughes Product.

Of strong one piece construction, the Soft Formation Cutter Head of the Hughes Core Bit is designed to recover cores in shale, anhydrite, chalk, medium hard sand rock, and softer grades of lime rock. It is also recommended for coring sticky formations interstratified with layers of hard rock.
The three blade design, together with beveled cutting edges, secures true rotation about the axis of the core and makes possible the obtaining of unbroken core.
Both soft and hard formation cutter heads fit the same bit body making it necessary to have only one bit head on a drilling well.

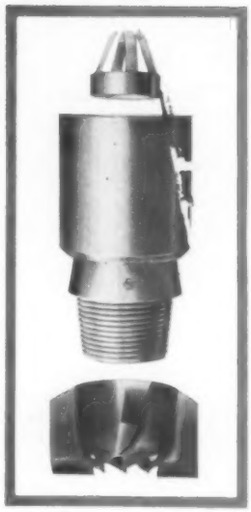
HUGHES TOOL COMPANY

Service Plants:
Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Plant:
HOUSTON, TEXAS

Export Office:
Woolworth Building,
New York City

Guaranteed to take perfect cores in any formation that a fish tail or disc bit will penetrate



The H. C. Smith *Type* "C" Coring Outfit has been used in practically every type of formation in which fish tail or disc bits are used.

In every instance they have proved their ability to take perfect cores in these formations quickly and economically.

The detachable cutterhead is especially adapted for the use of hard sets and hard facing alloy metals; making it equal to the hardest drilling formations, and capable of making exceptionally long runs before dulling in these formations.

Send for our latest descriptive circular No. 20 which gives complete details of construction and performance.

H. C. SMITH MANUFACTURING CO., INC.

Los Nietos, California

Branch Offices and Warehouses:

Bakersfield, Calif. — **Ventura, Calif.**

Oil Well Supply Co., Exclusive Distributors for Smith Coring Equipment all Over the World (except in California)

Cable Address: **"Smithco, Whittier"**

H.C. Smith Type C Coring Outfit

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1897.

PREPAREDNESS

THE Navy is the mobile, the quick moving section of American defense. At the slightest indication of trouble a ship or a fleet is rushed to the scene.

The Portable Pumping Unit is the "navy" of the GASO line. It also is dispatched to the scene at the slightest indication of trouble. Is there a break in the pipe line? The Portable Unit is rushed on its own trailer to take up the burden. Is water service required? The Portable Unit is ready to perform it. Wherever emergency or semi-permanent pumping is required, the Portable Pumping Unit is at hand to furnish it.

The immediate success and growing sales of the Portable Pumping Unit are the best indications of its usefulness.

May we send you further details?

GASO PUMP & BURNER MFG. CO.

Tulsa · Oklahoma

Texas Office: 210 Petroleum Bldg., Ft. Worth, Tex.

Capacities 61 to 250 barrels at 800 to 275 pound pressures; fully enclosed and self-lubricating.

GASO PUMPS

for every oil industry need

Whatever you expect *you find in*

Strength Factors of safety to meet the unseen and unexpected emergencies of drilling. A derrick of weight and height to meet the conditions of the territory for which it is sold.

Durability Galvanized from gin pole to foundation plates. Even the bolts are galvanized. Complete protection from rust—the great destroyer of weather exposed material.

Safety Platforms and ladders are built into IDECO Derricks of such weight of material and manner of construction as to insure maximum safety to the workman.

Protection IDECO Derricks are a sound investment. They are a guarantee against the hazards of fire and windstorm which any day might topple derricks of less hardy construction and cause a suspension of drilling or pumping.

Service IDECO service is world wide. Wherever oil is found you will also find IDECO. Branches and warehouses are located within striking distances of all fields.

Economy If IDECO had no engineering superiorities over the products of other types of derricks, it would still pay the oil man to buy IDECO. Here is a company that has always played square—has helped pioneer—has built a world wide service—maintains a staff of engineers and metallurgists—and gives at a fair price a product which we honestly believe cannot be equalled.

THE INTERNATIONAL DERRICK & EQUIPMENT CO.

Detroit, Dallas, Houston, Mexia, Wichita Falls, Odessa, Pyote, Borger, Corsicana, Pampa, Panhandle, Shreveport, Oil City, Smackover

The largest company devoted to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries

COLUMBUS, OHIO — TORRANCE, CAL.

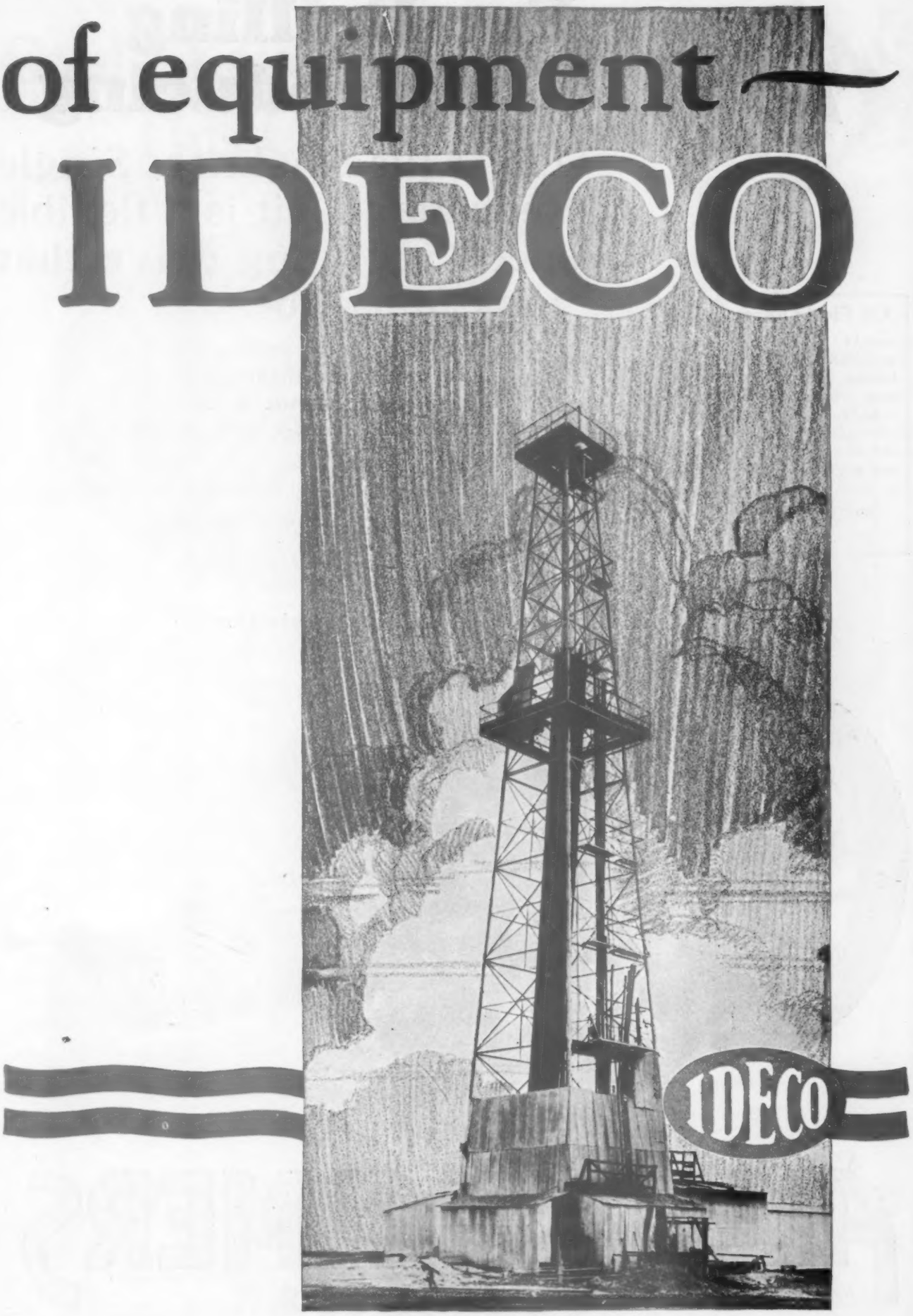
Allen, Sasakwa, Eldorado, Tulsa, Tonkawa, Drumright, Okemah, Seminole, Torrance, Los Angeles, Taft

Export Representation: 74 Trinity Place, New York City; Columbus, Ohio; Houston, Texas; Los Angeles, Cal. 514

INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

Say you saw it in The OIL WEEKLY

# of equipment IDECO



Say you saw it in The OIL WEEKLY

For Drilling For Producing

The Allis-Chalmers Single Reduction Unit is a flexible speed reducing drive that you can use for:

Single motor drilling
Twin motor drilling
Pumping standard rig
Driving band wheel powers

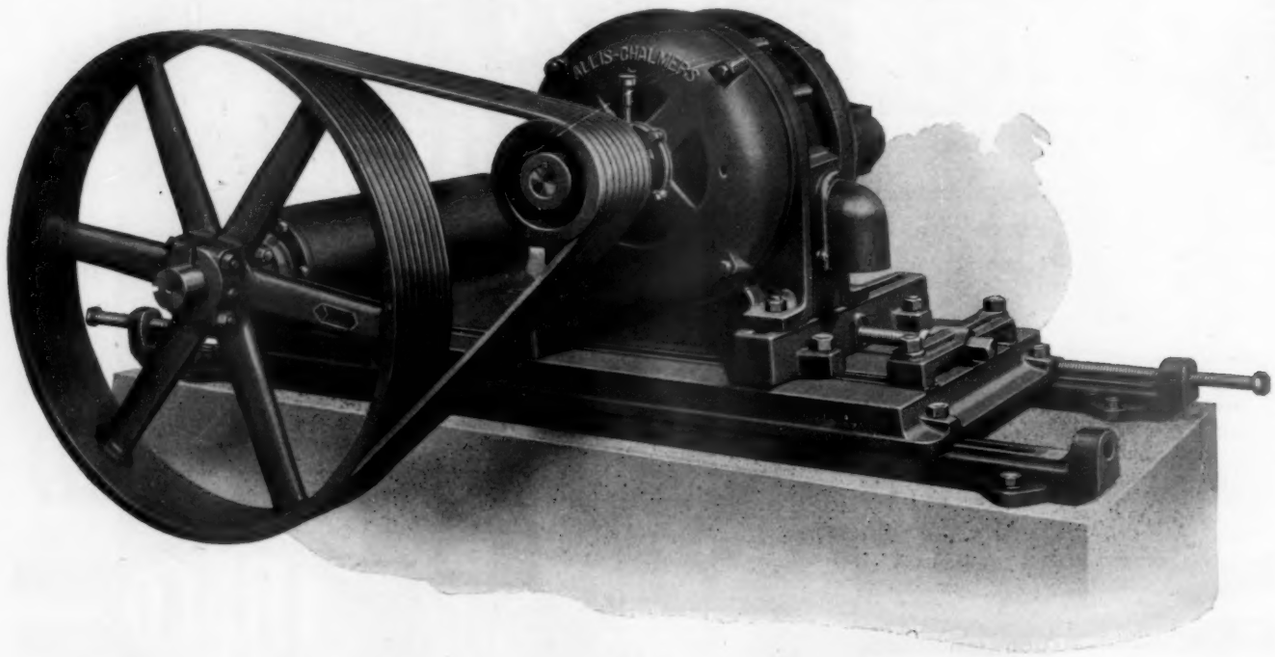
Texrope Drives are becoming increasingly popular in the oil fields.

Oil Field Offices

DALLAS
HOUSTON
KANSAS CITY
NEW ORLEANS
DENVER
LOS ANGELES
SAN FRANCISCO
SAN ANTONIO
EL PASO

WESTERN SUPPLY COMPANY
TULSA, OKLAHOMA

Stock at Houston, Tulsa and Sweetwater

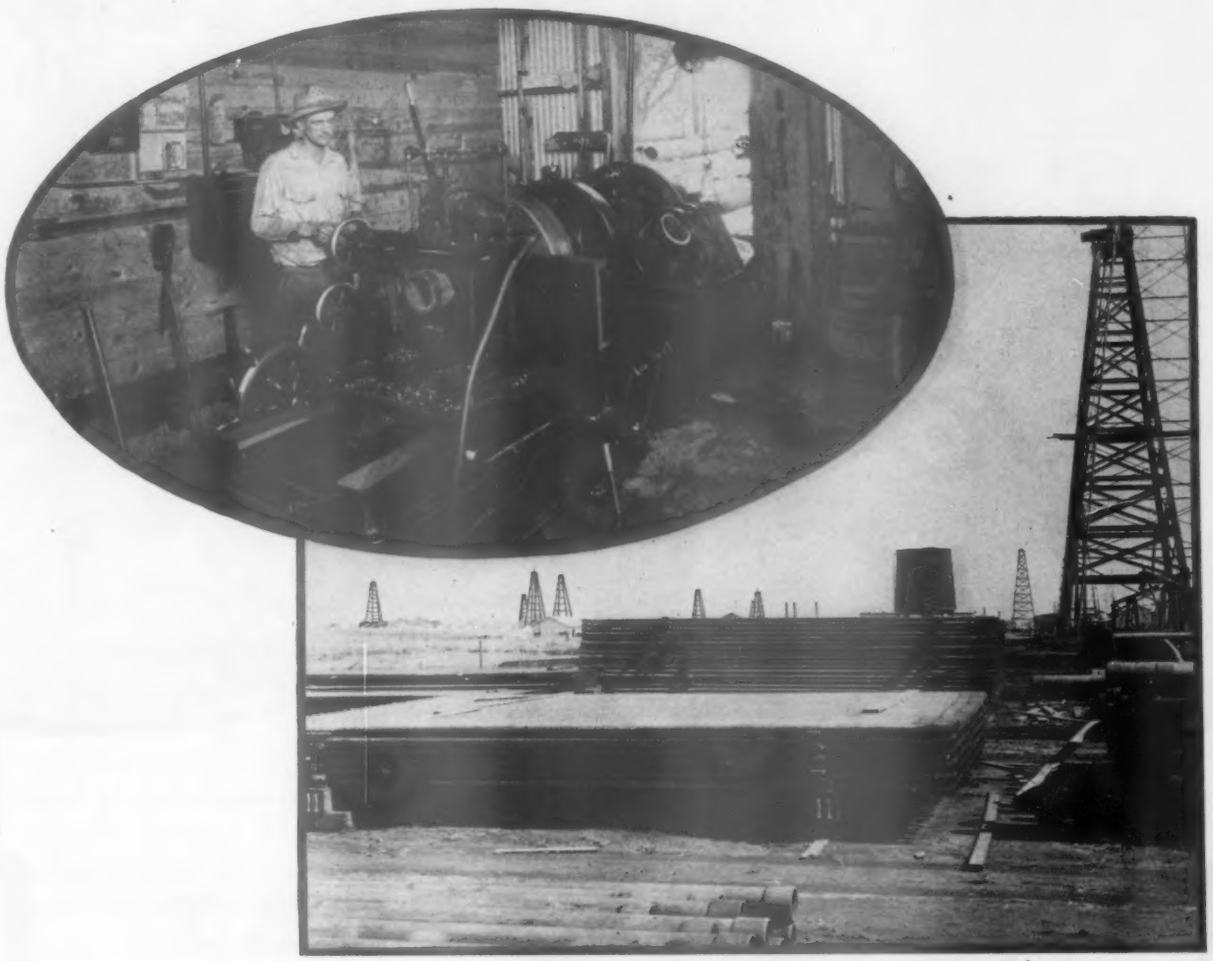


ALLIS-CHALMERS

MILWAUKEE, WIS. U. S. A.

Say you saw it in The OIL WEEKLY

Could You Make a Quality Job of This On Your Pipe Machine?



This 6" Landis Pipe Threading and Cutting Machine is rethreading old drill pipe in the shop of the Taubman Supply Corporation, Seminole, Oklahoma—and doing a quality job of it, too.

Old drill pipe is crystallized, scaly, and tough, but the Landis Machine cuts quality threads regardless of the material or condition of the pipe.

Landis Pipe Machines are Oil Field Machines—they ask no favors, and expect none. They thread iron, steel or seamless—new or re-run, and always do a quality job.

Isn't that your idea of a pipe machine for oil field work?

High production, ease of operation and economy are just as thoroughly a part of Landis machines as the high quality of the work they produce.

Cut your threads on a Landis—IT PAYS.

LANDIS MACHINE COMPANY, Inc.

WAYNESBORO, PENNA., U. S. A.

Detroit Office: 5928 Second Blvd.

Represented in the Domestic Oil Fields by: Colcord-Wright Machinery and Supply Co., St. Louis, Mo.; D. S. Mair Machinery Co., Houston, Tex.; Woodward Wight & Co., New Orleans, La.; Herberts Machinery & Supply Co., Los Angeles and San Francisco, Calif.; Hendrie & Bolthoff Mfg. & Supply Co., Denver, Colo.

Knowing how to properly treat a wire line and *doing it* means the difference between a good driller and the other kind.

These two Stark boys (right) use

WILLIAMSPORT WIRE LINES

TELFAX TAPE MARKED FACTORY CERTIFIED

They say Williamsport lines handle good and give long satisfactory service.

We have repeatedly said that a good line in the hands of a good crew, is a splendid investment.

Put good lines—Williamsport lines—in the hands of good drillers—men like the Stark boys, and *you'll* soon find that it pays.

Give a *Good* driller a *Good* line—Williamsport.

WILLIAMSPORT WIRE ROPE COMPANY

Main Office and Works: Williamsport, Pa.

General Sales Offices: 122 S. Michigan Ave., Chicago, Ill.

Oil Country Sales Offices: Williamsport Bldg., Fourth and Midland Valley Tracks, Tulsa, Okla.

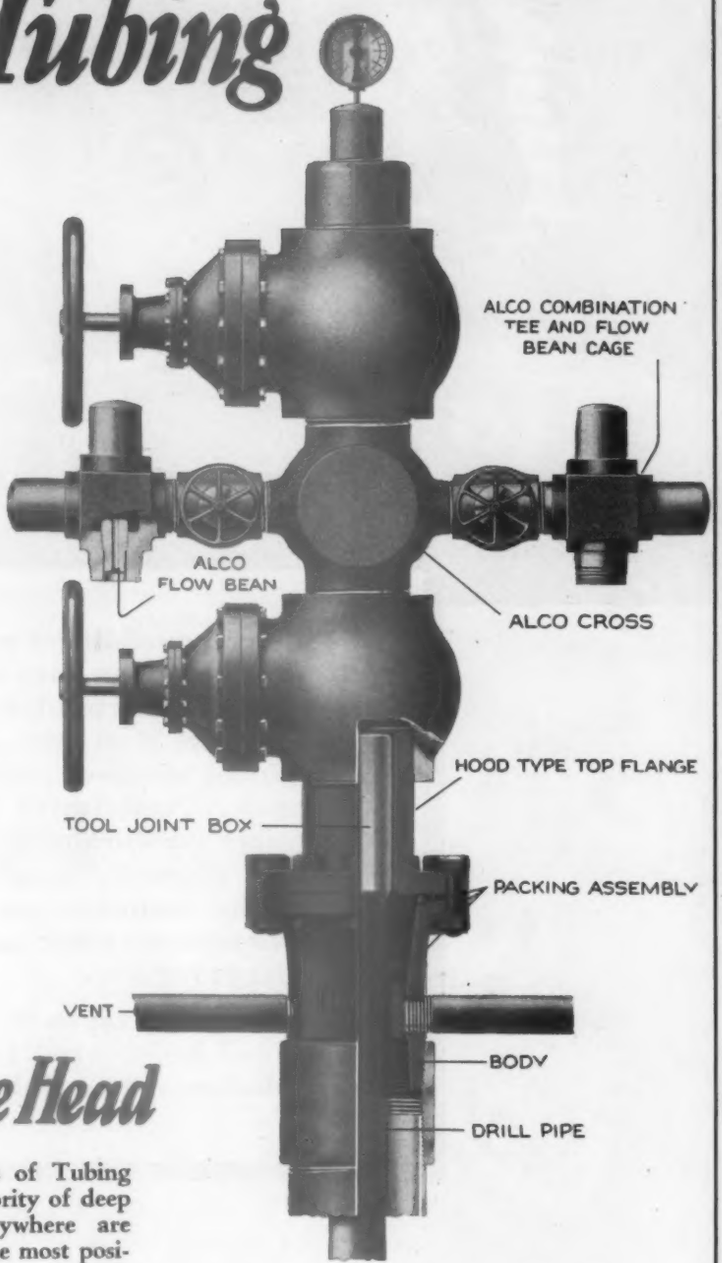
Distributors:

Houston Shidler Blackwell Ardmore Holdenville Bristow Wichita Falls
Smackover Arkansas City Shreveport Casper Lewiston Electra
San Antonio Seminole Borger Pampa Wink

Distributed by the Bridgeport Machine Company, Wichita, Kansas, and all of their Mid-Continent Branches

For bringing in wells thru **drill pipe** *instead of Tubing*

Frequently it is necessary to bring in the well without removing the drill pipe. This Regan Hood Type Head provides a means of setting and packing off the drill pipe so it can be used for tubing. It also provides a means of protection when drilling out baffle plate with small drill pipe prior to running tubing. Weight of the drill pipe resting on two semi-circular packing assemblies forms a positive seal. The Body is part of a regular Regan Tubing Head which can be converted to accommodate tubing later, if necessary.



Regan HOOD TYPE *Tubing & Drill Pipe Head*

Regan also manufactures two other types of Tubing Heads, (Regular and Colorado.) The majority of deep wells and wells in pressure fields everywhere are equipped with one of these, as they offer the most positive means of sealing.

Regan Forge & Engineering Co.
Manufacturers of Oil Well Equipment
Quality
San Pedro, California U.S.A.

Dallas, Texas 1504 Magnolia Building
New York City 75 West St., Wm. Braat, Mgr.
Okla. City, Okla. 2201 W. 21st St.
Pecos, Texas P. O. Box 444
Pampa, Texas
Maracaibo, Venez. Wm. Adams, c-o Amer. Consul

PUT YOUR PIPE RESPONSIBILITIES SQUARELY UP TO "REPUBLIC"

PRODUCTS
Tubing
Casing
Line and
Rotary Drill
Pipe

THE responsibilities of oil country pipe are taken into consideration when Republic tubular products are being made. Strength . . . uniformity . . . sound welds . . . clean, perfect threads . . . resistance to corrosion necessary for durability . . . these are innate "Republic" qualities, assured by careful manufacture and by tests and inspections more rigid even than standards require.

Republic Pipe Lines are reliable . . . they can be trusted to "carry on" trouble-free through the years.

REPUBLIC
IRON & STEEL CO. YOUNGSTOWN O.
PIPE & CASING

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Denver
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Seattle
Los Angeles
St. Louis

Say you saw it in The OIL WEEKLY

WARNING

To All Users of Westcott Orifice Meters

The Charts used on Westcott Orifice Meters are an integral part of these meters. The accurate measurement for which the meters are noted can be entirely ruined by the use of inferior charts.

Genuine Metric made Charts for Orifice Meters are printed on seasoned paper. This paper has been carefully aged so that reasonable exposure and changes in temperature will not have a tendency to expand and contract the paper. By expansion and contraction the perfect circular shape of the chart can be destroyed. Only Metric charts can be depended upon to furnish accurate results.

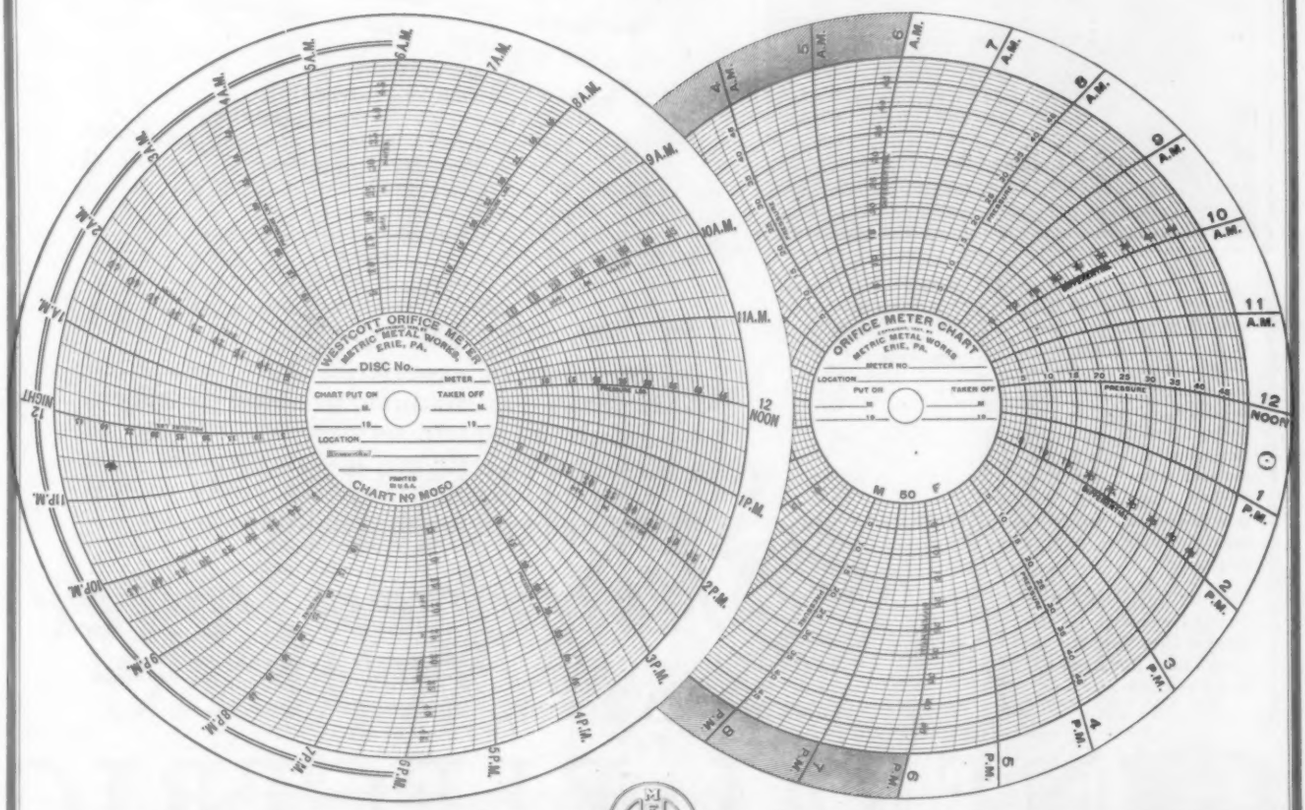
The process of chart manufacture is a delicate one. The center hole punched in the chart must be 100% concentric with the circular divisions of the chart. A chart which is eccentric in the slightest degree will ruin the accuracy of the differential and static pressure records left thereon.

The Purchasing Departments of some gas companies are not always aware of the fact that extreme accuracy and exactness is necessary in the manufacture of Orifice Meter Charts.

METRIC METAL WORKS
of the American Meter Company, Inc.
ERIE · PENNSYLVANIA · U-S-A

Sales Service

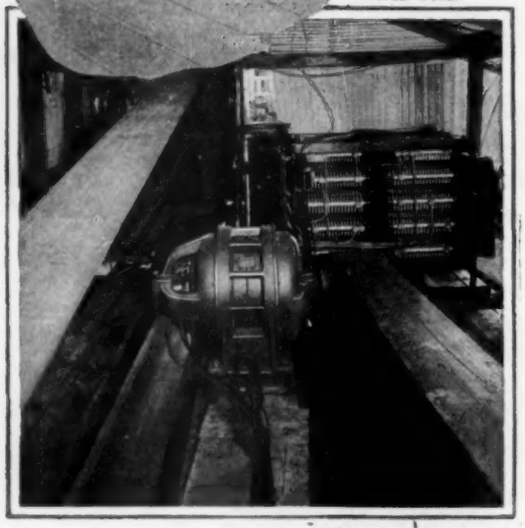
WESTCOTT & GREIS, INC.
DALLAS TULSA LOS ANGELES



Say you saw it in The OIL WEEKLY

Here's what Ben Beckley says about G-E drilling equipment

Mr. Ben Beckley, driller for Disney & Gholson, drilling contractors, West Texas



G-E equipped cable-tool drilling rig used by Disney & Gholson at Lassiter well No. 5, Prairie Oil & Gas Co., Crane Co., Texas

W. J. MORAN J. M. DEARMOND EARL J. MORAN

MORAN, DEARMOND & MORAN
LEASES & ROYALTIES
OIL INVESTMENTS
MIDLAND, TEXAS

March 10th. 1928.

General Electric Company,
Dallas, Texas.

Dear Sirs:-

It gives me pleasure to give the General Electric Standard Drilling Equipment my unqualified approval. After using the same for a period of six months I find it to be the most reliable, efficient and economical power I have ever operated after an experience of twenty-five years as a cable tool driller.

The control is practically perfect allowing a proper drilling motion and drop. For all other operations, I find it far superior to any other power steam not excepted.

Yours truly,
Ben Beckley.

BB-J

General Electric supplies complete electric equipment to the oil industry. With warehouse facilities close to your operations, G.E. readily furnishes motors, controllers, transformers, arresters and other protective devices, capacitors for power-factor improvement, switching equipment, etc.

G-E oil fieldspecialists at: Dallas, Denver, Houston, Kansas City, Oklahoma City, Tulsa, Los Angeles, San Francisco.

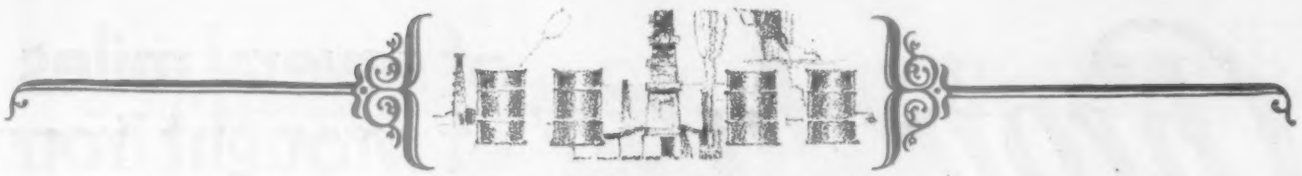
The years of experience, the unexcelled facilities for manufacture and research, and the complete service organization of General Electric are at your disposal. The nearest G-E office is always ready to furnish information and helpful advice.

Motorized Power
-fitted to every need

200-197

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN PRINCIPAL CITIES



More barrels per pump

Axelson INTERCHANGEABLE *LINER* Oil Well Pumps

Axelson Machine Company

P. O. Box 337, Los Angeles
Tulsa, St. Louis, New York City, 30 Church St.
Mid-Continent and Eastern Distributors—Frick-Reid Supply Corporation

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

Say you saw it in The OIL WEEKLY

Chronology of several miles of wrought iron line pipe

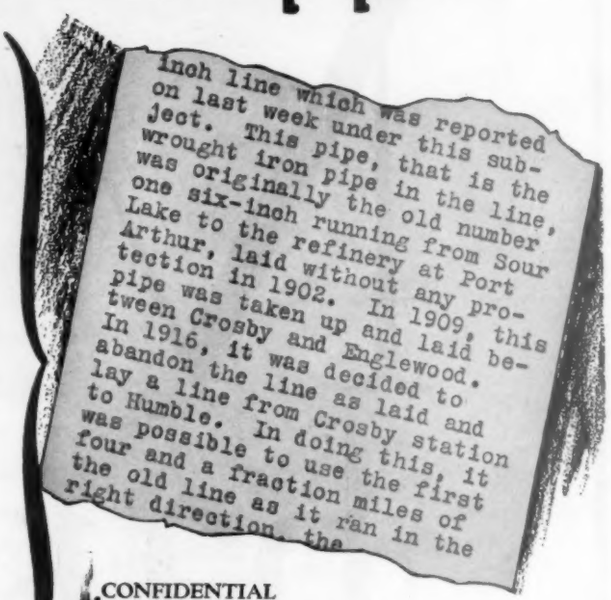
1902 — a six inch line laid without protection from Sour Lake to Port Arthur.

1909 — Same line taken up and laid between Crosby and Englewood.

1916 — First 4 miles of same line laid between Crosby Station and Humble.

1928 — Same 4 miles shipped to Panhandle

and still giving excellent service


inch line which was reported
on last week under this sub-
ject. This pipe, that is the
wrought iron pipe in the line,
was originally the old number
one six-inch running from Sour
Lake to the refinery at Port
Arthur, laid without any pro-
tection in 1902. In 1909, this
pipe was taken up and laid be-
tween Crosby and Englewood.
In 1916, it was decided to
abandon the line as laid and
lay a line from Crosby station
to Humble. In doing this, it
was possible to use the first
four and a fraction miles of
the old line as it ran in the
right direction, the

CONFIDENTIAL REPORT . . . . . .

This is an extract of a daily report by one of Byers' representatives located in the oil country. Byers' men are constantly studying corrosive conditions as regards tubing, line pipe, etc., both before and after installation of Byers genuine wrought iron pipe. These reports, actual and uncolored, are illuminating since they consistently show the economy of wrought iron pipe.

IN the case reported above, a total of 26 years' service is recorded with the wrought iron pipe showing no sign of failure. The original line was made partly of steel and partly of wrought iron. After serving for so many years in so many places, all but 3% of the wrought iron pipe was used again in another installation made this year.

This case, while remarkable as compared with the performance of cheaper pipe, is not unusual where wrought iron is used. Service records of a vast variety of wrought iron pipe installations, in oil fields, in railroad service and in industry, all prove that genuine wrought iron so far has been the only metal which has consistently fulfilled the promises made for it at the time of installation.

Oil operators in increasing numbers are choosing Byers Pipe for its ability to resist the corrosive influences of swamps, river crossings, salt marshes and alkali soils.

The small extra cost of Byers Pipe is fully justified by the years of extra life it gives. It will continue to give good service long after ordinary pipe material has corroded.

A. M. BYERS COMPANY

Established 1864 Pittsburgh, Penna.

Branch Offices

HOUSTON SAN ANTONIO
DALLAS TULSA
LOS ANGELES SHREVEPORT

Distributors

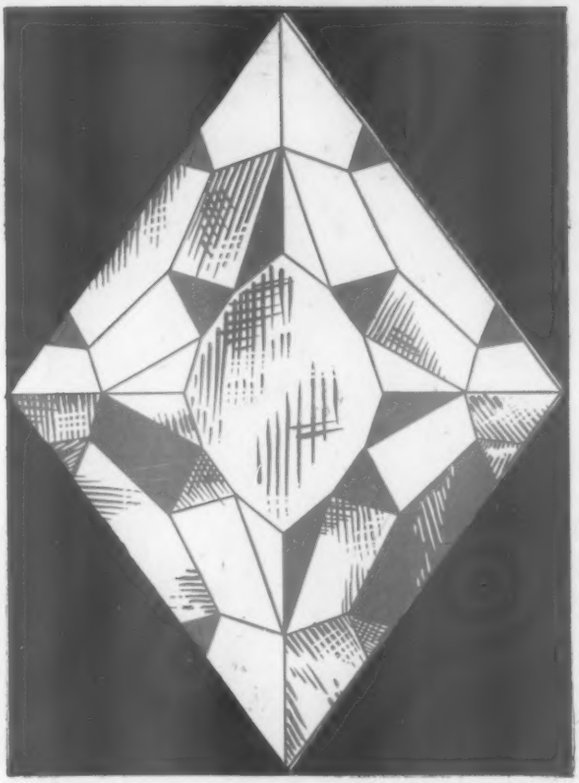
International Supply Co.
Jarecki Manufacturing Co.
Oil Well Supply Company

BYERS Line Pipe

GENUINE WROUGHT IRON

Say you saw it in The OIL WEEKLY

"Makes Any Good Bit Better"



TUNGSTITE

Tungstite is a diamond substitute, especially adapted to oil well drilling bits, *the hardness of which is only exceeded by a true diamond.* When properly set, it will give to any size or type of rotary drilling bit the ability to cut from two to six times as much hole as formerly, increasing the life of the bit in like proportion. The outstanding difference between Tungstite and other so-called diamond substitutes is its exceptional quality and resistance to wear. Each lot is carefully selected by hand and only that material which tests a perfect diamond substitute in toughness and durability can pass the rigid Elliott standard. Let us submit some Tungstite performance records for comparison.

ELLIOTT CORE DRILLING CO.
840 Subway Terminal Building
LOS ANGELES, CALIFORNIA

Branches:

3210 Harrisburg Blvd., Houston, Texas
15 So. Madison St., Tulsa, Okla.
618 Lake St., Shreveport, La.
104 Brien St., Beaumont, Texas
Elms Specialty Company,
516 Seventh St., Wichita Falls, Texas
417 S. Washington Street, El Dorado, Arkansas

Export Office:
150 Broadway, New York

Say you saw it in The OIL WEEKLY

The Emsco Jack and Timken Bearings

Heavy loads, severe strain, like that encountered by the Emsco Simplex Pumping Jack No. 3, only serve to demonstrate why the oil fields use more Timken Bearings than all other anti-friction types combined.

Such service demands more than friction-elimination, power economy, and lubrication savings. It also demands the extreme radial-thrust capacity, compactness, endurance and continuous operation provided by Timken Bearings.

That every oil field requirement is met in actual service by Timken Bearings is proved by the Emsco Derrick and Equipment Company, Los Angeles, California, and many other highly reputed makers of equipment. They all know that only Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS* and Timken electric steel can produce Timken results.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* BEARINGS

Say you saw it in The OIL WEEKLY

AN IDEA and A BUSINESS

PERSONAL SERVICE is the outstanding feature of the relations between this company and its customers. By Personal Service we mean not merely the necessary requirements of a customer—but a closer, more human interest in the desires and preferences of that customer, to the end that nothing may be left undone to promote satisfaction and good will.

This spirit of Personal Service is carried through our entire organization. From city desk to shipping platforms, each order is followed individually by men—who know not only the technical requirements of the customer but also his particular needs and preferences as to the route and manner of shipment, terminal facilities most convenient and every detail that may contribute toward satisfactory filling of the order.

We gratefully acknowledge a steadily increasing clientele of satisfied customers—merited by Quality Products and Personal Service and take this opportunity to express our appreciation.

NORVELL WILDER HARDWARE CO. QUALITY AND SERVICE

NORVELL WILDER HARDWARE CO.

BEAUMONT HOUSTON SHREVEPORT FORT WORTH

Say you saw it in The OIL WEEKLY

Be Careful In The Selection Of Lubricants For Your Motorized Equipment

Passenger cars and trucks of different makes vary considerably in type and design.

Be sure that you understand: (1). The type of lubricating system used, which determines the method of feeding the oil. (2). The type of cooling system used, this factor having more or less effect on the operating temperatures of various parts of the motor.

The proper lubrication of motor equipment means not only the lubrication of the engine cylinders — but the complete lubrication of all of the moving parts of the motor. Much harm can result from the use of too heavy an oil in a pressure system not designed to handle it—also where the "splash" system is used, the oil must not only flow easily, but must atomize readily so as to reach certain bearings which can be lubricated only by a fine mist. Your passenger cars and your trucks are designed to give you many years of service—if they are properly lubricated.

HUMBLE OIL & REFINING CO.
HUMBLE OILS
HOUSTON, TEXAS

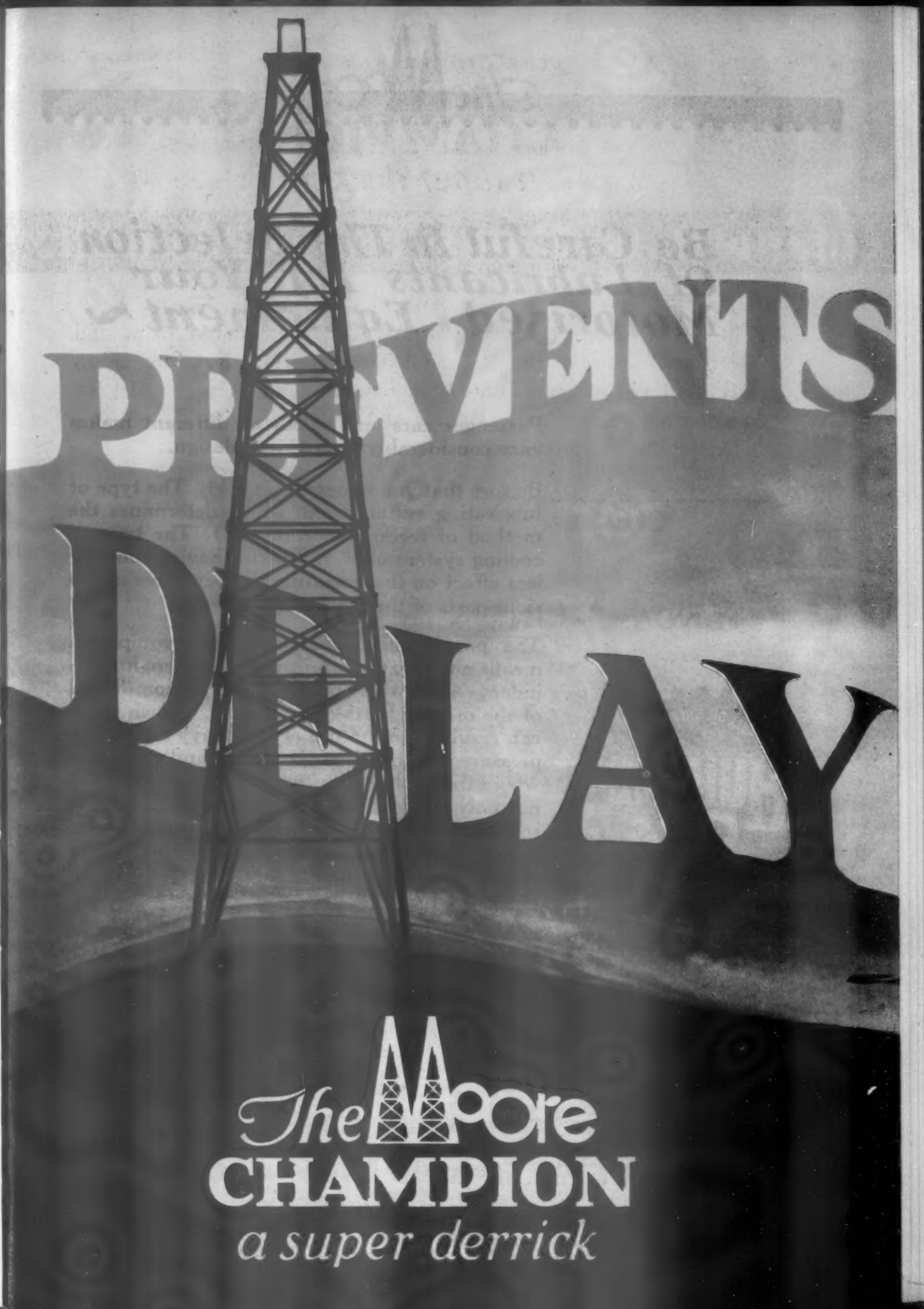
Reg. U. S. Pat. Off.

There is a Humble Oil which is specially prepared to meet every bearing need in your plant, your trucks, or in your automobile.

Humble Motor Oils are the result of years of experience in lubricating internal combustion engines. The recommendations of Humble engineers are an added factor of safety. Whether you operate one passenger car and truck, or a whole fleet of motorized equipment, it will pay you to learn more about Humble Oils.

Humble Oil & Refining Co.

Producers ~ Pipe Lines ~ Refiners ~ Marketers


PREVENTS
DELAY
The Moore
CHAMPION
a super derrick

The Moore CHAMPION
a super derrick

Conquers the Giants in the Oil Country

CORRECT design, careful manufacture, standardized parts, and other features of the Moore Champion Derrick, make it easy to erect and dismantle, and insure uninterrupted service. Such a derrick does much to prevent the expense and annoyance which the *Giant of Delay* brings to production operations.

STANDARDIZATION

makes for

CONVENIENCE

and

INSURES

PROMPT SERVICE

Wherever possible, all parts of the Moore Champion Derrick are standardized. Repairs, alterations or servicing of any kind can be done easily and promptly.

The seamless tubular leg sections are standardized, all starting, intermediate and top sections being drilled alike. Legs of various capacities are interchangeable in the same derrick. Clamps, too, are standardized.

From among the five different ladder sections, complete ladders may be made up for every Champion Derrick. Ladder landing platforms, fourble, treble and double platforms are all standardized. Crown safety platforms are alike for all tops, whether with 4′ 6″ or 5′ 6″ openings. Gin poles for all 5′ 6″ tops are alike.

With such complete standardization, the repair part list is greatly reduced and it is a simple matter to serve the producer promptly with parts and accessories. The Moore Champion Derrick conforms to A. P. I. specifications throughout.

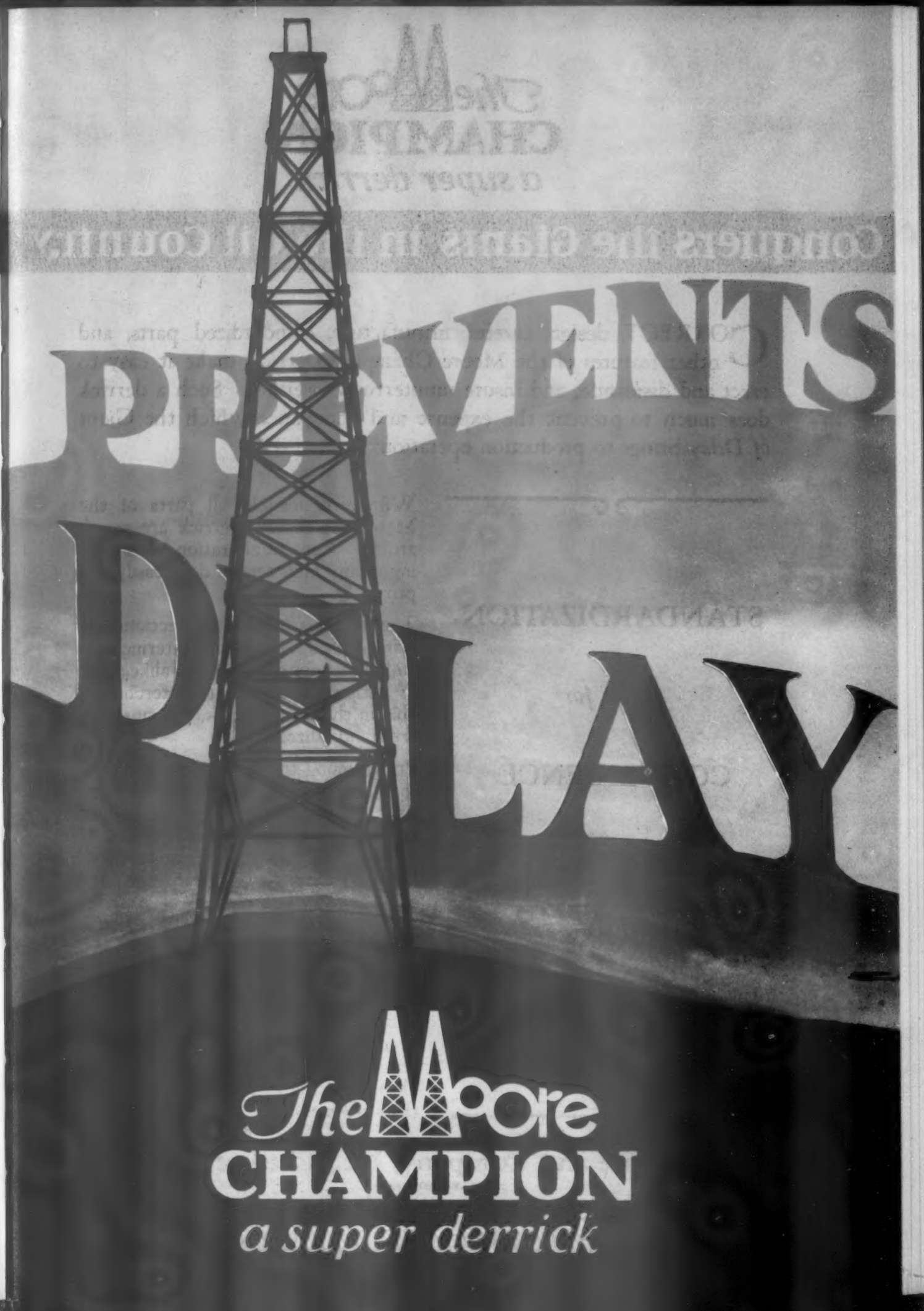
Lee C. Moore and Company, Inc., Pittsburgh · · Tulsa

ESTABLISHED 1907

New York Offices: Oilfield Equipment Company
30 Church St., New York, N.Y.

DALLAS, TEXAS · HOUSTON, TEXAS · WICHITA, KANSAS
PARKERSBURG, W. Va. · CASPER, WYO. · SHREVEPORT, LA.

Stocks in All Principal Fields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The seamless tubular leg sections are standardized, all starting, intermediate and top sections being drilled alike. Legs of various capacities are interchangeable in the same derrick. Clamps, too, are standardized.

From among the five different ladder sections, complete ladders may be made up for every Champion Derrick. Ladder landing platforms, fourble, treble and double platforms are all standardized. Crown safety platforms are alike for all tops, whether with 4′ 6″ or 5′ 6″ openings. Gin poles for all 5′ 6″ tops are alike.

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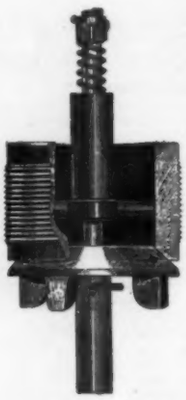

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Curtailed Refinery Runs Hold Gasoline Market Up

Generally improved conditions throughout the light oil districts reflected in strength of oil shares in trading; crude outlook better

CURBING of refinery operations in the Mid-Continent district to balance nearly in proportion to current gasoline demand has been successfuly accomplished so far this winter; and a reasonable profit is being realized by the plant owners. Nine cents is about the low mark on U. S. motor gasoline quotations, and export buying has been a contributing factor in prices holding near the peak level for the year.

With refining interests registering a profit on their operations, and a general improvement of conditions in the high gravity oil producing section of the Mid-Continent, the oil securities have enjoyed a big play on the New York stock exchange and curb lately. Rumors of mergers and substantial gains in earnings during the last quarter has caused a number of companies to register new peak levels on stock quotations, and the oil group as a whole are in popular demand with the stock buying public.

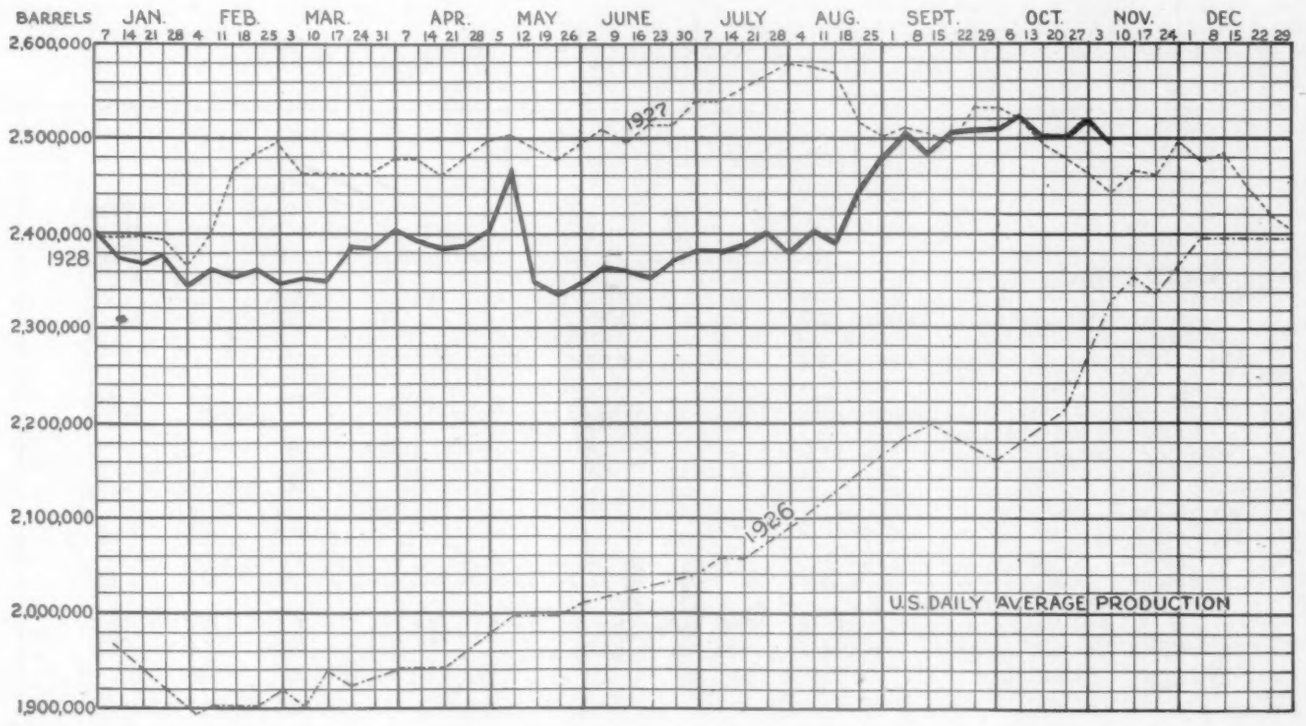
Orders to refiners in Oklahoma, Kansas and Arkansas during the week were slow, resulting from heavy rains in Arkansas, snow and rain in Kansas and a cold break accompanied by some rain over Oklahoma. An interesting change in the market situation, evidenced especially in Kansas and Northern and Western Oklahoma, is the coming demand for higher gravities of gasoline. The 62 gravity replaced some orders of U. S. Motor gasoline, and the higher gravities from 62 to 66 are destined to play a strong part in forthcoming orders. This is lending more strength to naturals, which since October 25 have shown a perking up in demand. Nine cents was the bottom and 9½ cents the high on U. S. Motor gasoline at the close of the past week, with Western Oklahoma and Kansas leading in refinery postings.

Thus far fuel oil has gained little strength in the upper Mid-Continent territory, though large quantities are being consumed by refineries that have replaced natural gas as fuel for their stills with fuel oil. The low price of fuel oils and the fact that refiners have large quantities on hand stand out as the chief reasons for this change. At least a half dozen major refiners have made this change recently. For the above reasons refiners have found it economical to use fuel oil to replace natural gas a fuel at this time.

While gasoline stocks in any part of the Mid-Continent cannot now be considered in the burdensome class, Oklahoma had approximately 50 per cent. of the total with around 28,500,000 barrels on hand November 1. This represented an increase of about 400,000 barrels over November 24. Kansas gasoline stocks are in better shape than any single section of the Mid-Continent, with only approximately 6,575,000 barrels on hand November 1, which shows a decrease in stored gasoline of nearly 1,000,000 barrels during the last week in October. Excessive sales during that period together with a reduction of crude runs of several Kansas refineries mainly brought about this decrease in stocks. Few Oklahoma refiners have made reductions in crude runs thus far. A holding of high summer runs has been made possible largely through good motoring weather during October.

Kerosene in Oklahoma and Kansas is sluggish, contrasted with the brisk Texas

UNITED STATES CRUDE PRODUCTION TREND



markets resulting from purchases made by major refiners and exporters in the past few weeks.

Crude Outlook Better

The crude oil outlook in Oklahoma and Kansas gained further strength last week by a decline of 13,000 barrels at Greater Seminole, making a decline of 21,500 barrels within 10 days prior to November 2, when the market breaking area fell to a new low since development of South Little River field, gauging only 296,769 barrels. Added strength is also given the crude situation by an average of two new wells daily at St. Louis failing to hold production steady. St. Louis gauged 122,823 barrels November 2 from 217 wells as compared with 130,670 barrels October 18 from 194 wells. Oklahoma's daily yield November 2 ran more than 30,000 barrels less than that of October 2.

Having been refused Mid-Continent gravity scale prices for its production from the discovery well of the Edwards lime pay in the Bruner pool, Caldwell County, Texas, Sun Oil Company completed arrangements last week to market its own production and a quantity of outside oil by installing a pipe line system and tank car rack. This oil tests above 34 degrees gravity, and has been run heretofore by Magnolia Pipe Line Company at a flat price of $1.00 per barrel, which is the latter's posting for Luling district low gravity crude. Sun Oil Company also contracted to purchase oil from other producers, paying gravity scale prices, and will load the oil on tankers at its terminal near Sabine Pass.

A similar situation has developed in Howard County, West Texas district, where the Henshaw Oil Corporation has a 5000 barrel wildcat producer making 34 gravity oil, but major companies in the district limited their price offer to 65 cents per barrel. The latter price has been posted for oil testing 6 to 10 degrees lower on gravity in the district. Henshaw Oil Corporation made contract October 29 to sell Cosden & Company 5000 barrels or more daily for one year of this crude at a flat price of 80 cents per barrel for that testing 32-34 gravity, and at 65 cents for any crude that may be produced that registers less than 32 gravity. Humble Pipe Line Company had built a gathering line to the above producer, but no oil has been run, owing to controversy over the posted price. This producer is directly responsible for the Texas Railroad Commission ordering the Howard-Glasscock County deep pay area increased from 25,000 to 30,000 barrels daily on allowable production effective November 1, and the above well will be allowed to flow 5000 barrels daily temporarily.

Negotiations are now pending for Cosden & Company, which has a pipe line system connecting its producing leases in the Howard-Glasscock County deep pay area with a tank car rack and refinery that is being erected near Big Spring, to sell 1,000,000 barrels of the "regular" deep pay production to Standard Oil Company of Louisiana. It is reported that the latter concern will pay 72½ cents per barrel f.o.b. rack for the first 250,000 barrels delivered, and 10 cents per barrel above the field posted price of Humble Oil & Refining Company for the remaining portion of the contract. Deliveries to be made at the rate of 10,000 barrels daily. Arrangements are being made for the McMahon Oil & Pipe Line Company to furnish tank car equipment, and look after the movement of the crude to Standard's tank farm at Shreveport, where the oil will be put into pipe line delivery to the Baton Rouge refinery.

Three new pools making low gravity oil were uncovered at widely scattered points in the Southwest during the past week, including a flowing well in Southeastern New Mexico through the wildcat activities of the Skelly Oil Company.

The West Texas district added a new county to the producing list when Shipley and associates scored a well in southeastern Ward County, and Cranfill, Reynolds & Loomis, Dallas operators, uncovered a small flowing well from the serpentine pay in Bastrop County, Southwest Texas District. The latter is 27 gravity oil.

California

The actual flow of crude from the deep sand in the Santa Fe Springs field has started, and while it is not yet large enough to cause alarm, the fact that the first wells exceeded expectations has not had a beneficial effect on the crude market. Every phase of the market has anxiously awaited developments in this very critical area and three good wells out of as many attempts is taken as an indication that California is in for another period of overproduction. The possibility of a peak production of more than 250,000 barrels is not relished by the industry as a unit. It should require only a few weeks to determine what may be expected for the first months of 1929. In the meantime, the crude market is under a nervous strain which probably will grow worse until a decline is in sight.

Efforts to prorate oil production, as well as gas, are being made, but little progress is noted in this direction. The liklihood that the state may take a hand has forced cooperation along the lines of gas curtailment, but the matter of reducing oil runs is still vague. Of course, it will be difficult for the state to prove that the operators are wasting even a barrel of oil, whereas all surplus gas would be wasted under ordinary circumstances.

There has been no change in the gasoline market, although domestic consumption is showing its seasonal decrease. Exports are in a healthy condition, with both the Atlantic seaboard and Pacific foreign trade holding steady. Shipments to Washington and Oregon have shown the customary fall decline.

Details on Critical Fields

	Oil Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Prod. Per Well	Rigs Up	Wells Drilling
WEST TEXAS								
Hendrick	401	2,258,020	5,631	416	144,615	*348	27	98
Church & Fields	187	203,045	1,086	186	30,210	*162	....	2
Gulf-McElroy	66	55,130	835	66	13,550	205	....	2
Yates	276	1,801,165	6,526	273	74,490	*273	6	10
Totals	930	4,317,360	4,642	941	262,865	279	33	112
TEXAS PANHANDLE—								
Hutchinson County	1,124	548,015	488	996	30,415	31	4	24
Gray County	284	123,870	436	273	28,810	106	15	52
Carson County	181	59,370	328	158	6,225	39	2	11
Wheeler County	44	14,645	333	35	795	23	5	10
Moore County	4	2,420	605	2	1,565	782	2	10
Totals	1,637	748,320	457	1,464	67,810	46	28	107
OKLAHOMA—								
Greater Seminole	1,548	2,057,188	1,228	1,256	296,769	236	78	102
St. Louis	217	267,278	1,231	217	122,823	565	13	104

*Production partially pinched.

Recent Developments Give Kansas New Importance as Reserve

Wildcat activities in western end of state has brought favor to section hitherto not considered; well average drops during year

By WALLACE DAVIS
Staff Representative

WITH 4962 oil wells added to Kansas fields from July, 1927, to July, 1928, giving the state 19,838 producers, the average output per well declined 2.32 barrels to 5.29 barrels.

This low well average fails to justify the status of fields over the state generally, due to the "grass root" area of southeastern Kansas that has a wide range of production but a small yield. The significance of this shallow producing territory is seen in the fact that it had 13,157 barrels daily from 12,528 wells at the close of last July. Nearly two-thirds of the state's wells making approximately one-eighth of the state's oil. If the production situation in 16 counties of Eastern and Southeastern Kansas were excluded, the state's well average would amount to 26.24 barrels.

Natural decline that has been more pointed than usual for Kansas fields has, however, resulted in much of the decline in the well average. With no new areas developed thus far in 1928 to add material strength to Kansas' total output, the yield dropped below the 100,000 barrel level in September, the lowest production for the state since January, 1926.

The production situation in Kansas is keenly interesting due to the recent turning point in the state's importance as a crude reserve. In proportion to past significance, Kansas has shown a more rapid climb in importance within the past four months than any other single spot in the United States. Although its present awakening outstrips any previous seige of activity, the history of Kansas development reveals that "moral support" among operators from the beginning has come spasmotically. It was true back to the time when the grst wildcatter in the state got the idea, then considered foolish, that there was oil there. And, notwithstanding the continued strikes that have come periodically, a discovery in Kansas is taken with much surprise. The famed El Dorado's 10,000 to 15,000-barrel wells commonly listed through the field's history failed to put Kansas on a convincing basis with the producer. The western side of the state, especially, has been consistently held up as non-productive. Then the M. M. Valerious strike in Butler County disproved that existing theory, but they wouldn't accept anything west of this discovery as good.

Wildcatter Gets Interested

Kansas has gained more real recognition within the past four months than it probably did in all its past history. The Bu-Vi-Bar, Marland, Gypsy discovery north of Wichita, Sedgwick County, was chiefly instrumental in putting Kansas on a paying basis with the wildcatter. Numerous other showings encountered by the wildcatter of recent date, added to the Wichita strike, has made any acreage in Western Kansas sound and look good. As a result, Kansas has led all other areas in the country recently in the amount of leases turned to the operators. Sedgwick County has led in the number of deals, but more than a dozen counties west of Sedgwick have been the mecca of lease and royalty buyers. This portion of the state has also recently led the entire Mid-Continent in geopsysical work and core drilling. There are almost as many major producing com-

Comparison of Well Average in Kansas

FIELD—	July 1927 Wells	July 1927 Prod.	July 1927 Well avg.	July 1928 Wells	July 1928 Prod.	July 1928 Well avg.
Augusta	446	3,035	6.80	444	2,312	5.20
Benton	-----	-----	-----	2	21	10.50
Butler County Misc.	145	1,251	8.62	140	745	5.32
Churchhill	49	16,237	331.36	74	10,195	137.77
Cowley County Misc.	40	662	16.55	50	737	14.74
Douglas	114	714	6.26	105	552	5.25
Elbing	120	2,502	20.85	120	2,155	17.00
El Dorado	1,257	7,707	6.13	1,260	7,350	5.83
Elk County Misc.	237	2,361	9.91	227	1,858	8.18
Florence-Urschell	60	732	12.20	52	530	10.19
Fox-Bush	324	1,265	3.90	325	939	2.88
Graham	25	1,200	48.00	29	450	15.51
Greenwood County Misc.	99	2,333	23.56	122	1,575	12.90
Harvey County	4	42	10.50	4	37	9.25
Keighley	93	2,295	24.67	92	1,036	11.26
Leon	124	3,507	28.28	163	5,921	36.32
Lost Springs	4	200	50.00	45	1,507	33.48
Lyon County	88	1,795	20.39	89	1,105	12.41
Nuttle-Koggier	131	1,925	14.69	130	1,515	11.65
Oxford	13	1,855	142.69	93	11,142	119.80
Peabody	115	1,436	12.48	98	1,120	11.42
Polhamus	192	1,421	7.40	189	927	4.90
Potwin	56	398	7.10	55	511	9.29
Rainbow Bend	105	2,152	20.49	106	1,175	11.08
Reno County	1	30	30.00	1	42	42.00
Rice County	21	2,030	96.66	24	1,145	47.70
Robinson-Cameron	98	545	5.56	96	511	5.32
Rock	18	256	14.22	93	1,395	15.00
Rooks County	----	----	----	1	41	41.00
Russell County	106	2,785	26.27	126	4,465	35.43
Sallyards	201	1,396	6.94	201	1,509	7.50
Seeley	536	10,262	19.10	555	6,551	11.80
Sellers-Covert	46	772	16.78	43	441	10.25
Sumner County Misc.	7	1,123	160.42	9	855	95.00
Teter-Pixlee	468	10,517	22.47	461	6,422	13.93
Thrall-Burket	247	2,486	10.06	254	1,753	6.90
Towanda	336	2,655	7.93	327	2,320	7.09
Virgil	775	4,525	5.83	905	7,215	7.97
Wilson-Dunkle	188	1,490	7.93	184	1,715	9.32
Winfield	117	3,275	27.99	116	2,063	17.78
*Eastern Kansas Misc.	10,196	12,786	1.25	12,528	13,157	1.05
Total	14,876	113,226	7.61	19,838	105,015	5.29

*Includes shallow production in Chautauqua, Montgomery, Labette, Eastern Elk, Neosho, Wilson, Woodson, Allen, Anderson, Bourbon, Linn, Franklin, Miami, Johnson and Douglas counties.

panies included in this activity as there are individuals, the class of producer that heretofore played the biggest part in Kansas development.

Results of drilling in Kansas' newly discovered territory amount to little now as far as statistics on production go, because development has not had time to mean much around the new discoveries. However, 1929 is scheduled to be the most active year for the state. As to a new production peak, 1930 looms as the most promising year for Kansas. The proof that Western Kansas is a likely sizeable oil reserve, plus better prices during the coming two years, is held by operators as a real chance for big development there.

The Wichita discovery well, completed August 9, for an initial output of 52 barrels an hour which increased within three days to 1680 barrels, from one foot of pay topped at 3367 feet, has shown less fluctuation than the average discovery well in any territory, and November 1 was holding at its high point. This well is Bu-Vi-Bar Oil Company's strike in SE NE SE Section 12-26-1w, and is owned by the discoverers and Gypsy Oil Company and Marland Production Company, who have approximately 4000 acres around the producer. Nearly everything in the county is leased up now as a result.

Some opinion has it that the Wichita strike is a freak well, lying near the south extremity of a long, narrow pay vein. Offset and semi-wildcat development now under way will prove or disprove this opinion, but its going to take more than a few dry holes now to take the wildcatter, who finally has smelled oil in Western Kansas, out of this region.

Large Blocks

Western Kansas development and production, in event of the latter, is destined to be an example of conservative operating because of the methods of blocking acreage prevailing there. Most of the acreage leased is in blocks running into thousands of acres, and a single concern or group of concerns leasing jointly on pooling agreements, or the like, have in some instances more than 25,000 acres blocked practically solid.

In the accompanying table showing Kansas' well average by fields or counties, Sumner County stands out as the most highly prolific spot in the state. It has been this county that prevented the state's yield from comparatively passing out of the picture within the past two years. Churchill field, discovered and owned almost entirely by Roxana Petroleum Corporation, starred for Kansas in the last half of 1926 and first half of 1927 and proved to be no doubt the most profitable field the state has produced. With the Churchill pool's decline came Oxford, also a Roxana discovery, which maintained the state's yield at a fairly high level during the last half of 1927 and first half of 1928. Both fields, which passed 20,000 barrels at a peak, were settled between 8000 and 9500 barrels November 1.

The famous Golden Lane Trend cutting Greenwood County in a narrow producing vein contributes its share of high yield for individual wells, and alike have produced considerable quantities of the state's crude for the past four years.

In the accompanying table showing Kansas production by months the coming of Churchill field into production is evidenced by the gradual rise of the daily output for the state, beginning in the spring of 1926. At the time of the Oxford development, which had its real start in July, 1927, the decline of Churchill field, together with other sections of the state, largely offset the rapidly rising yield of the new field. Lack of a new field being developed early in 1928 to offset Oxford's loss resulted in the present decline that Kansas has avoided for nearly three years.

The following table gives Kansas production in daily average by months for the past two years and 10 months, and illustrates the consistent increase from January 1, 1926, through that year and then the gradual return to the state's present low figure:

October, 1928	98,350
September	99,150
August	102,200
July	102,750
June	105,200
May	108,715
April	112,150
March	112,250
February	110,550
January	108,300
December, 1927	106,150
November	106,650
October	105,100
September	105,200
August	107,750
July	113,200
June	113,850
May	114,600
April	115,400
March	116,100
February	116,250
January	117,200
December, 1926	118,800
November	115,800
October	114,650
September	113,400
August	111,750
July	110,450
June	107,900
May	106,150
April	102,600
March	103,000
February	102,050
January	99,600

The following table of field activity in Kansas for the weeks ending July 10, 1927 and 1928, shows a change in the number of operations, although the present widespread development in the state was not well under way by July of this year:

	Rigs	Drlg	SD	Compl	Ttl.
July 10, 1927	58	122	72	17	269
July 10, 1928	83	149	62	32	326

There is evidence, however, of greater activity this past July as compared with a year previous, even though the present rush activity had barely started. The increase of 25 rigs with the decrease of 10 idle wells gives some contrast of the aggressiveness in the two years.

Securing Route for Line for Transcontinental

Fort Worth, Texas.—United Producers Pipe Line Company, subsidiary of the Transcontinental Oil Company, has taken option, or purchased outright, more than 80 per cent. of the right-of-way on the ten-inch line that is proposed to be built from the Yates field to Texas City, according to H. D. McCracken, vice-president of the former concern. Right-of-way men have been at work for several months, and are paying for pipe line construction privileges on strips of land involving less than 50 rods.

The starting of actual construction work on this trunk line has been delayed pending the outcome of suit filed by Transcontinental Oil Company against the Mid-Kansas Oil & Gas Company, partnership owners of the largest producing leases in the Yates field, for equal division of oil produced. This partnership has 96 producing wells on 51.3 units (100 acres each), with a combined estimated potential production of 1,968,990 barrels, and will be allowed to produce a maximum of 33,636 barrels daily during the first proration period of November. Mid-Kansas Oil & Gas Company is marketing all oil produced, based on contract made between the two concerns before discovery of the field. Transcontinental Oil Company received an unfavorable verdict in a lower court hearing in Fort Worth several months ago when plea was made for an equal share in the crude, but the case is to be submitted to the United States Supreme Court next week.

Roxana in Market for Tanks for Houston

St. Louis, Mo.—Representatives of the various tank manufacturing companies will congregate here November 7 to submit bids on more than 100 large and small tanks, aggregating about 15,000 tons of steel, to be used in connection with the refinery and large crude tank farm to be erected by Roxana Petroleum Corporation on the Houston Ship Channel. This tank business will probably represent an expenditure of more than $1,000,000.

Prairie Runs

Independence, Kansas.—Prairie Pipe Line Company reports deliveries for October amounted to 6,254,380 barrels, or 217,542 barrels daily.

San Francisco.—Shell Company has developed a small production of natural gas in San Mateo County, but probably will make no effort to market its product under present conditions. One well recently made about a quarter of a million cubic feet but is now standing shut in. Shell Company is drilling ostensibly for oil, but would welcome a large flow of gas.

Program Outlined for A. P. I. Annual Meeting

Group sessions featuring technical subjects pertinent to various branches arranged for gathering at Chicago on December 3

THE American Petroleum Institute makes the following preliminary announcement of the program, as tentatively arranged, for its Ninth Annual Meeting, to be held at the Stevens Hotel, Chicago, December 3, 4, 5 and 6, 1928. A revised program will be published before the Annual Meeting indicating changes and additions.

MONDAY, DECEMBER 3, 1928

2:30 P.M. Meeting Board of Directors.

TUESDAY, DECEMBER 4

10:30 A.M. Meeting of the Board of Councillors. To nominate candidates for election as members of the Board of Directors.

12:30 to 2:00 P.M. Luncheon. Meeting of the Board of Directors.

2:30 P.M. *General Session*:

The President's Address.

Report of Board of Councillors.

"Value of Standardized Oil Field Equipment," W. G. Skelly, Skelly Oil Company.

"The Banker's Interest in the Petroleum Industry," Craig B. Hazlewood, Union Trust Company, Chicago; President, American Bankers Association.

WEDNESDAY, DECEMBER 5

12:30 to 2:00 P.M. Luncheon. Meeting of Board of Directors.

10:00 A.M. Group Meetings:

Group 1—General Topic: PRODUCTION.

Chairman: W. S. Farish, Humble Oil & Refining Company.

"Production and Proration in the Texas-Arkansas-Louisiana Area," J. Elmer Thomas, Fort Worth.

'Gas Conservation and Production in California," M. E. Lombardi, Standard Oil Company of California.

"The Mid-Continent Production Situation," Ray M. Collins, Echo Oil Company.

"Production Developments in Rocky Mountain District," S. H. Keoughan, Continental Oil Company.

Group 2—General Topic: REFINERY TECHNOLOGY.

Chairman: P. M. Miskell, Empire Refineries, Inc.

"Utilization of Heavy Oil Acid Sludge," H. G. Osborn and L. L. Davis, Marland Refining Company.

"Process Conversion of Cylinder Stock Sludge to Plant Fuel Oils," L. W. Barbour, Pierce Petroleum Corporation.

"Control of Refinery Odors," David E. Day, Richfield Oil Company.

"Refinery Evaporation Conservation," E. C. Herthel and William Mendius, Sinclair Refining Company.

"Burning of Clay in Multiple Hearth Furnace," MacLean Houston, United Refining Company.

"Use of Some Catalytic Agents in Revivifying Used Filter Clay," F. R. Lang, Roxana Petroleum Corporation.

Group 3—General Topic: AUTOMOTIVE TRANSPORTATION.

Chairman: D. E. Buchanan, Chestnut & Smith Corporation.

Work of Automotive Committee in 1928.

"The Maintenance of Automotive Equipment," H. W. Kizer, The Texas Company.

"Motor Vehicle Cost Accounting and Its Relationship to Economical Fleet Operation," G. W. Gwynne, Continental Oil Company.

"Transport Hauling on the Pacific Coast," F. H. Asbury, Asbury Transportation Company.

2:00 P.M. Group Meetings:

Group 1—General Topic: DEVELOPMENT AND PRODUCTION ENGINEERING.

Chairman: Thos. A. O'Donnell.

"Unit Operation of Oil Fields," J. O. Lewis, Dunn & Lewis.

"Function and Application of Gages to Oil Country Material," B. S. Terry, Pratt & Whitney.

"Pumping Experiments," F. W. Lake, Union Oil Company of California.

"Care and Use of Sucker Rods."

Group 2.—General Topic: REFINERY TECHNOLOGY: PIPE STILL DISTILLATION OF LUBRICATING OILS.

Chairman: John L. Gray, Shaffer Oil & Refining Company.

A discussion of the relative advantages of vacuum as compared with the use of steam at atmospheric pressure.

"Reducing 2500 Barrels of Pennsylvania Crude Per Day to Cylinder Stock Bottoms on Single Pass Pipe Still," A. C. Vobach, Sinclair Refining Company.

"Applications of the Pipe Still to Vacuum Distillation," A. E. Harnesberger, Pure Oil Company.

"A Summary of the Relative Advantages of Pipe Still Distillation under Vacuum and with Steam at Atmospheric Pressure," W. A. Peters, E. B. Badger & Sons Company.

"Equilibrium Vaporization of Oils and Carrying Effect of Light Ends," R. F. Piroomov and G. A. Beiswenger, Standard Oil Company of New Jersey.

Group 3—General Topic: A CODE OF PRACTICES FOR MARKETING REFINED PETROLEUM PRODUCTS.

Chairman: Roy B. Jones, Panhandle Refining Company.

The Regional Committees appointed to consider and make recommendations with respect to a national petroleum industry Code of Ethics have made recommendations to the General Committee, which is composed of the chairmen of the several regional committees.

The General Committee will recommend the complete draft of "A Code of Practices for Marketing Refined Petroleum Products" to the Board of Directors on Monday afternoon, December 3.

The complete text of the Code, as approved by the Board of Directors, will be presented by the General Committee on Code of Ethics to this group session for discussion and for ratification.

All oil men engaged in the marketing of refined petroleum products and the development of a national code of marketing practices are invited to attend.

8:00 P.M. Group Meeting:

Group 2—General Topic: REFINERY TECHNOLOGY.

Chairman: (To be announced.)

"Developments in Refinery Technology," E. W. Isom, Chairman, General Committee on Refinery Technology.

Paper (subject to be announced), A. E. Dunstan, Anglo-Persion Oil Company.

"Topping and Cracking of West Texas Crudes and Treatment of Distillates from these Crudes," H. H. Hewerton, Beacon Oil Company.

"The Refining of Pecos Crude," Sydney Born, Transcontinental Oil Company.

"The Relation of the Liquefied Petroleum Gas Industry to the Oil Industry," R. C. Alden, Phillips Petroleum Company.

THURSDAY, DECEMBER 6, 1928

Note: There will be no General Session on Thursday. The day will be devoted to group meetings, arranged by general topics, at which the various subjects will be treated in addresses by selected speakers. Opportunity will be given for brief general discussion of the subject.

EXECUTIVE COMMITTEE MEETING

12:30 P.M. Luncheon. Meeting of the Executive Committee of the Board of Directors.

MORNING

10:00 A.M. Group Meetings:

Group 1—General Topic: DEVELOPMENT AND PRODUCTION ENGINEERING.

Chairman: J. Edgar Pew, Sun Oil Company.
"Tubular Goods Used in Drilling," Melbert Schwarz, Rio Bravo Oil Company.
"Choice of Equipment for Exploration Wells," Wendell M. Jones, Petroleum Equipment Company.
"Handling Flowing Wells in the Mid-Continent Fields," J. R. McWilliams, Skelly Oil Company.
"Experiments on Screen Pipe," E. A. Carr, Pure Oil Company.

Group 2—General Topic: REFINERY TECHNOLOGY.

Chairman: (To be announced.)
"Testing and Maintenance of Fire Foam Solutions," J. B. Rather and D. P. Weld, Standard Oil Company of New York.
"Automatic Viscosimeter," Clifford M. Larson, Sinclair Refining Company.
"Development of the Logarithmic Viscosity Temperature Chart," Neil MacCoull, The Texas Company.
"Methods of Testing Gear Lubricants," C. L. Knopf, Sinclair Refining Company.
"Formation of Acetic Acid in Heat and Pressure Cracking," F. W. Hall and R. deM. Taveau, The Texas Company.
"Treatment of Naphthene Base Petroleum Distillates," G. F. Olsen, General Petroleum Corporation.

Group 3—General Topic: CORROSION.

Chairman: (To be announced.)
Report of Sub-Committee on Production and Pipe Line Corrosion, E. P. Bly, Standard Oil Company of California.
Report of Sub-Committee on Refinery and Marine Corrosion, H. F. Perkins, Gulf Refining Company.
Report of A. P. I. Research Associate at Bureau of Standards, Gordon N. Scott.
"Accelerated Tests on Paints and Coatings," C. T. Langford, Marland Companies.
"Combating the Corrosion of Pressure Stills," W. F. Faragher, Universal Oil Products Company.

2:00 P.M. Group Meetings.

Group 1—General Topic: BUSINESS SESSION OF THE DIVISION OF DEVELOPMENT AND PRODUCTION ENGINEERING.

Presiding: John R. Suman, Chairman of the Division.
Chairman's Report of 1928 Activities of the Division.
Election of National Officers.
Report of Committee on Drilling Practice.
Report of Committee on Production Practice.
Open Forum: Discussion of progress and suggestions for conduct of Divisional activities during 1929.

Group 2—General Topic: REFINERY TECHNOLOGY: MOTOR FUELS.

Chairman: (To be announced.)
Two papers covering the results of the Co-operative Motor Fuel Research at the Bureau of Standards (subjects and speakers to be announced.)
"The Accuracy of Various Methods of Determining Detonation," Neil MacCoull, The Texas Company.
"Service Testing Methods for Petroleum Products," Alois Kresner, Standard Oil Company of California.
"Significance of Gum in Gasoline," R. E. Wilson, Standard Oil Company of Indiana.

Group 3—General Topic: MARKETING PROBLEMS.

Chairman: H. B. Earhart, White Star Refining Company.
"Economics of Marketing Petroleum Products," John D. Gill, Atlantic Refining Company.
"Marketing Equipment Problems," B. L. Majewski, Shaffer Oil & Refining Company.
"Credits," H. M. Edinger, Barnsdall Refining Company.
"The Extension of Sales of Asphalts," J. S. Helm, Standard Oil Company of New Jersey.
"The Present and Potential Market for Oil Fuels for Heating," Trell W. Yocum, Oil Heating Institute.

8:00 P.M. Annual Dinner.

"Trends in Oil and Gas Laws," Gurney E. Newlin, President, American Bar Association.
"Petroleum Problems Outside the United States," Sir John Cadman, Chairman, Anglo-Persian Oil Company.

COMMITTEE MEETINGS

A large number of A. P. I. Committees will meet at Chicago immediately preceding or during the Annual Meeting. The Chairman of each committee will indicate to the respective members the time of meeting and the Stevens Hotel room number. Among the committees which will be called to meet are the following:

General Committee on Uniform Methods of Oil Accounting.

General Committee on Oil Pollution.

General Committee on Fire Prevention.
Sub-Committee on Vents, Screens and Flame Arresters.

General Committee on Automotive Transportation.

General Committee on a Petroleum Industry Code of Ethics.

General Committee on Refinery Technology.
Sub-Committee on Testing Methods and Specifications.

General Committee on Standard Procedure for Measuring, Sampling and Testing Crude Oil.
Sub-Committee on Uniform Tank Measurements and Gage Tables.

General Committee on Division of Development and Production Engineering.
Committee on Standardization of Nomenclature and Well Records.
Committee on Standardization of Production Procedure.

General Committee on Railroad Transportation.
Mechanical Sub-Committee.
Sub-Committee on Demurrage Rules.
Sub-Committee on Industry Side Track Agreements.
Sub-Committee on Diversion and Reconsignment Rules.
Committee on Vapor Pressure.

General Committee on Corrosion.
Sub-Committee on Production and Pipe Line Corrosion.
Sub-Committee on Refinery and Marine Corrosion.
Conference with Manufactuers of Pipe Coatings.

General Committee of the Division of Standardization.
Committee on Standardization of Oil Field Boilers.
Committee on Standardization of Belting.
Committee on Standardization of Cable Tool Joints.
Committee on Standardization of Rigs and Derricks.
Committee on Standardization of Oil Country Tubular Goods.
Committee on Standardization of Rig Irons.
Committee on Standardization of Rotary Drilling Equipment.
Committee on Standardization of Wire Rope and Manila Cordage.
Committee on Standardization of Pumping Equipment and Engines.
Committee on Standardization of Steel Storage Tanks.
Committee on Fundamental Research.
Committee D-2 (A. S. T. M.) on Petroleum Products and Lubricants.
Committee on Public Relations.
Committee on Revision of A. P. I. By-Laws.
Legal Committee on Oil and Gas Lease Forms

Oklahoma Production Rallies After Decline

Maud area extended half-mile by well good for 1000 barrels; completion mile south of Little River has too much water showing

By WALLACE DAVIS
Staff Representative

TULSA—Returns from drilling in the flush fields of Oklahoma rallied over the past week-end offering new strength after a week of steady declines in production. The crude level, however, still stood at a material loss as compared with the previous week's output.

A 100-barrel-an-hour for St. Louis field, a half-mile extension discovery in the Maud area good for 1000 barrels, and a sharp increase in the Section 5-7-7 discovery well after deepening, headed Oklahoma's outstanding developments of the week.

The Texas Company completed Cherry 1, sw nw nw Section 25-7-4, St. Louis field, for 100 barrels an hour from Wilcox pay at 4255-60 feet after that formation was topped at 4230 feet. Production started November 4 and was holding at the initial output the following day. Amerada Petroleum Corporation proved up production in Section 8-8-5 November 3, completing Gossland 1, ne corner sw quarter for a Misner sand well at 4046-51 feet. The hole was drilled into Hunton lime at 4051 feet to 4101 feet, but production is reported by the operators to be from Misner sand. With Misner sand as a marker, this well is 18 feet higher than Gypsy Oil Company's Bourassa 1, discovery well in se ne Section 7-8-5, and Pure Oil Company's Lindley 1, discovery well in se sw se Section 18-8-5. Amerada Petroleum Corporation's 40-acre lease is 2640 feet north and south in length, making up the east quarter of the southwest quarter of Section 8. Magnolia Petroleum Company has the same size strip offsetting Amerada on the west and is drilling an offset location.

Mid-Continent Petroleum Corporation's Smith 1, nw ne Section 5-7-7, Wilcox discovery well of this area more than a year ago, which has been producing open for more than six weeks, produced 2495 barrels November 4, about 60 per cent increase over production before deepening late last week to 4447½ feet. Top of the Wilcox sand is 4444 feet, and the well was initially drilled in only one foot. Tidal Oil Company's Harrison 1, nw Section 10-7-7, was shut down for orders last week after getting 600 feet of water in the hole from Wilcox sand at 4488-90 feet. It is a half-mile east and two locations south of Sands Petroleum-McCulloch Oil Company's Harrison 1, which is now making around 100 barrels of oil and considerable salt water.

Greater Seminole production declined to 296,769 barrels November 2, a new level since South Little River development, but was returned to 302,520 barrels at Sunday's gauge only to register another loss Monday. The following production table shows the low level of the Seminole fields for the past week and the fluctuation of St. Louis, giving the number of wells by days:

	Greater Seminole		St. Louis	
Date—	Prod.	Wells	Prod.	Wells
October 30	302,834	1257	126,783	212
October 31	302,837	1256	129,354	214
November 1	303,364	1256	125,106	216
November 2	296,769	1256	122,823	217
November 3	298,581	1258	124,318	217
November 4	302,520	1259	124,047	218
November 5	301,062	1260	129,892	220

T. B. Slick's Wood 1, NE SW Section 26-7-6, Cromwell sand well completed late in October for a mile south extension to Little River field, showed little probability of good production late last week when water took the lead in output. Gravity of the oil is 34, and the well made 780 barrels of oil and 800 barrels of b.s. and water from 3325-31 feet.

Another water and oil producer of importance is Mid-Kansas Oil & Gas Company's Moore 1, NW SW SE Section 7-8-6, Mission field, which is pumping 35 barrels of oil and 125 barrels of water.

Earlsboro

T. B. Slick and Skelly Oil Company's Campbell 1, SE NW Section 6-9-6, east extension to Earlsboro field, swabbed 650 barrels in 18 hours November 4 after a 20-quart shot in Wilcox sand at 4352-62 feet. Campbell 2, a north offset, topped Viola lime at 4354 feet and set six-inch casing. McCulloch Oil & Gas Company and New England Oil & Pipe Line Company's Rentie 1, NE NW NW Section 7-9-6, produced 20,000,000 feet of gas from Earlsboro sand from 3741-54 feet and was drilling ahead after mudding off gas production from an initial yield of 50,000,000 feet. Mid-Continent Petroleum Corporation's Rogers 1, SE SW Section 5-9-5, Earlsboro field, swabbed 60 barrels of oil in 12 hours and had 2700 feet of oil in the hole from sand at 4589-94 feet. Independent Oil & Gas Company's Alfrey 1, SW NE Section 7-9-5, west of Earlsboro field, was reported spraying some oil from Viola lime topped at 4264 feet, where standard tools were rigged up to drill deeper. Gypsy Oil Company's Hunick 2, SW SE Section 5-9-5, swabbed 430 barrels in 21 hours from Wilcox sand at 4518-28 feet.

The Texas Company's Hotulke 4, SE SW NW Section 23-7-6, south edge of Little River field, swabbed 450 barrels of oil from Wilcox sand at 4489-4501 feet. This company's Janey 3, NE NW SW Section 11-7-6, had a hole full of water and a slight oil show from sand at 3884-97 feet November 1.

In Bowlegs field Magnolia Petroleum Company's Rhodes 7, Section 12-8-6, got a hole full of water in Wilcox sand at 4180-83 feet and was shut down for orders November 5. In Seminole City field Carter Oil Company's Mitchell 1, NE SE SW Section 9-9-6, got a hole full of water in Hunton lime at 4150-80 feet, and November 2 was drilling at 4189 feet.

St. Louis Field

Gypsy Oil Company's Johnson 1, NW SE NW Section 29-7-5, got a hole full of water in Wilcox sand at 4558-61 feet and plugged back to Simpson sand at 4548 feet for 120 barrels of oil on the swab. Magnolia Petroleum Company's Tull Fyke "C" 1, NE SE SE Section 20-7-5, got water in Wilcox at 4260-62 feet and plugged back to 4200 feet for 56 barrels of oil on the swab. Roxana Petroleum Corporation's Youts 1, NW SW Section 28-7-5, which extended St. Louis field three-quarter miles southeast October 30, swabbed 122 barrels oil and 40 barrels water in Simpson sand at 4298-4303 feet Saturday and 131 barrels oil and five barrels water Sunday. Sinclair Oil & Gas Company's Nadash 3, NW SW NW Section 29-7-5, plugged back to 4243 feet in Simpson after getting water in Wilcox at 4245-59 feet. T. B. Slick's Linn 2, SE NE NW Section 30-7-5, got water in Wilcox at 4491-95 feet and is being plugged back. Gypsy Oil Company's Stahl 7, a water well in Wilcox at 4352-65 feet, and Phillips Petroleum Company's Stahl 4, Section 30-7-5, were both being plugged back Monday of this week.

Healdton Oil & Gas Company's Clour 1, SW NW NW Section 20-7-4, Pearson pool, west of St. Louis, which discovered oil in Viola lime late in October, swabbed 250 barrels November 4 from 4317-25 feet.

Allen Field

Ramsey Petroleum Corporation's Millner 1, SE NW SW Section 17-5-8, Allen field, flowed 215 barrels from Cromwell sand at 2366-76 feet late last week. Parker 1, SW NW SE Section 17, of the same company, made 180 barrels after deepening to pay at 2412-2550 feet. Westheimer & Daube's Wade 5, SW NE Section 19-5-8, made 250 barrels from 2555-2612 feet. Louisiana Oil Refining Corporation's Statler 2, SW SE SW 7-5-8, made 200 barrels from 2694-2724 feet, and Sunray Oil

Corporation's Larney 1, NE NW Section 19-5-8, flowed 600 barrels from 2627-2708 feet. O. K. Portland Cement Company's Matthews 2, C NW SW Section 24-4-7, Pontotoc County, got a 7,000,000 foot gas well from 1370-73 feet late last week.

Lario Oil & Gas Company and J. J. Donohue's Donohue 1, SW NW SE Section 21-18-2w, nine miles north of Guthrie, had a good showing but no free oil from a sand drilled at 5375-5408 feet, and was drilling November 2 at 5480 feet. Production from the 22 producers in Logan County, north of the above wildcat, has shown a gradual decline for the past few weeks, and is exemplified by a 300 barrel drop to 8675 barrels November 3. Eleven of these wells are in the Roxana pool, near Marshall, making 5450 barrels. The other 11 are in Lovell field, Township 18-4w, making 3225 barrels.

Okfusgee County Producer

Producers and Refiners Corporation and John Cary's Monarye 1, NW NE SE Section 29-12n-10e, Okfuskee County, is estimated a 30-barrel well from Dutcher sand at 2925-30 feet. Prairie Pipe Line Company has connected to run the oil. Darby Petroleum Company is starting Micco 1, NW SE Section 33-12-10.

Rush County—Kansas

M. M. Valerius et al's Schreverman 1, C NW Section 27-17s-17w, Rush County, Kansas, is flowing 3,000,000 feet of dry gas from Gorham sand topped at 3595 feet.

Bruner, Edwards Lime Field, Has 1,000 Barrels Production

Houston.—Daily production from the Edwards lime in the new Bruner field, near Luling, Caldwell County, is around 1000 barrels, and there is now considerable activity there.

Sun Oil Company's Malone 1, discovery well of the Edwards lime production in the Bruner area, late last week was holding to a flow of 567 barrels daily. Golden West Oil Company's Wilson 3 is flowing around 325 barrels; and Lutex Oil Company's Wilson 2 is making 110 barrels of fluid, 65 per cent. water.

Three new locations have been made in the field within the past few days, one by the Gulf Production Company and two by The Texas Company. Gulf Production Company's location is the Davis 1, located in the A. Floyd survey, 150 feet from the southeast line and 150 feet from the southwest line of the 15-acre lease. The Texas Company locations are on the Merriweather land in the A. Floyd survey; the No. 1 being 150 feet from the northeast line and 450 feet from the southeast line of The Texas Company's 117-acre lease; and the No. 2 being 750 feet from the northeast and 150 feet from the southeast line, and offsetting Suttle et al's Malone 1.

Present activity in the field, according to a late report, was as follows: J. S. Abercrombie's Moses 1 was drilling shale at 1936 feet. Datex Oil Company's Hickman 1 was in shale at 325 feet. Golden West Oil Company was preparing to plug back in its Wilson 2, and was rigging up Wilson 4. Luling Oil & Gas Company's Carter 3 at 2775 feet was flowing sulphur water together with a little oil. Lutex Oil Company's Davis 3 has spudded, and Davis 4 was in the top of the chalk at 2300 feet. T. C. Hadley's Tiller 1 was flowing sulphur water at 2833 feet. Radcliff et al's Malone 1 has set 6⅝-inch casing at 2270 feet, and was drilling at 2380 feet. Sun Oil Company's Malone 2, offsetting the Edwards lime discovery well, was drilling in chalk at 2444 feet. M. K. Townes' Hickman 1 at 2619 feet was in the Georgetown. Cranfill & Reynolds are rigging up on Smith 2 and Smith 3, and have abandoned location of Smith 1, as the state railroad commission objected to the drilling of three tests on the five-acre Smith lease.

New Serpentine Field In Bastrop County, Texas

Houston.—A new serpentine field has been opened in Bastrop County through completion of Cranfill & Reynolds' and A. M. Loomis' wildcat test, Andy Yost 1, as a flowing well. The bottom of the hole is at 1598 feet, and the test first encountered the serpentine at 1480 feet.

The well swabbed 280 barrels the first 10 hours, after which it began flowing on November 4 at the estimated rate of 60 barrels daily. The oil tests 27 degrees gravity.

The location of the well is 324 varas plus 450 feet from the southeast line of the A. Garcia survey, Abstract 400, and 769 varas, minus 450 feet from the west line of the C. C. Bradford tract. It is southwest of the little town of Cedar Creek, a few miles west of Bastrop; and is seven miles north of Lytton Springs. The oil is reported to be similar to that found in the Lytton Springs field, which is also producing from the serpentine.

This new area makes a total of three serpentine fields in the district, the other, in addition to Lytton Springs, being Dale. The Lytton Springs and Dale fields each have now about 1000 barrels daily production.

Magnolia Petroleum Company has been asked to lay a line to the new Bastrop field. The new field is in the southwest corner of Bastrop County, while Lytton Springs and Dale are farther south in northern Caldwell County.

Howard-Glasscock Proration is Increased 5,000 Barrels

BIG SPRING, Texas. — Allowable production from the deep lime horizons in the Howard-Glasscock County area was authorized to be increased 5,000 barrels to a maximum of 30,000 barrels daily effective November 1, by the Texas Railroad Commission. The increase was made to take care of the flush production offered by the wildcat oil producer owned by the Henshaw Oil Corporation on the W. R. Settles land, located about three miles west of the original deep pay area, and the latter well will be allowed to produce 5000 barrels daily temporarily.

Officials of the Henshaw Oil Corporation made formal plea to members of the Commission October 24 for a separate proration plan to be used in the new producing area, basing the request on the fact that the Settles producer was making a 34 gravity oil, which is much higher than that found in the lime horizon in the main field, and also on the difference in pay level. Major pipe line companies serving the original field refused to quote a higher posted price for the oil in the new pool. However, the Henshaw Oil Corporation obtained contract October 29 to furnish Cosden & Company, which is erecting a refinery near Big Spring, 5,000 barrels, or more daily, for a period of one year at a price of 80 cents per barrels for crude ranging from 32 to 34 gravity, and any crude testing less than 32 gravity will command a price of 65 cents, the latter figure being the present posted price in the original deep pay area. The Cosden Pipe Line Company is building a lateral line from its eight-inch trunk line, which extends from the Chalk-Roberts field to the refinery tank farm, and will begin running oil this week.

A commercial pumper is practically assured from the Taylor-Link Oil Company's Kloh-Rumsey 1, located about half mile north of the Henshaw-Settles discovery well, after plugging back from water horizon at 2389 feet and shooting with 400 quarts at 2260-2357 feet. The Louisiana Oil Refining Corporation's Kloh-Rumsey 1, located about three-quarters of a mile north of the discovery well, missed the pay, and has cemented 8¼-inch casing at 2360 feet to make a 4,000-foot test.

Electric dehydrating plants are being installed by Cosden & Company, and Magnolia Petroleum Company to handle cut oil from the deep pays in the Chalk-Roberts area.

Harry W. Bishop, Jr., general sales manager of the Harrisburg Pipe & Pipe Bending Company, Harrisburg, Pennsylvania, was the guest of the Harrisburg Supply Company members, distributors of Harrisburg products in the Mid-Continent territory, during the Oil Exposition.

Ward County Wildcat Opens New West Texas Area

Potential production gauge for Winkler County fields shows substantial loss, while that for Yates field shows gain

By H. H. KING
Staff Representative

SAN ANGELO, Texas.—Wildcat activity in the southeastern part of Ward County yielded the first oil produced for the county late last week when J. F. Shipley and associates' Hayzlett 1 began flowing 32.5 gravity oil by heads at irregular intervals after drilling about one foot into sandy-lime pay at a total depth of 2480 feet.

The well is credited with having made during the first three days several hundred barrels of oil in flowing heads, with very little gas in evidence. The owners are preparing to set casing and erect storage to deepen.

The well is one of the rankest wildcat strikes made in the West Texas district in many months, as it is about 25 miles from the nearest production of any kind.

Two of the trio of wildcats reported last week with shows of oil in the Yates Field shallow horizon have been eliminated as prospective producers by encountering sulphur water in the big lime, while the third test has not been drilled in because of delay in straightening up titles. Zoch-Moncrief et al's wildcat on the Cordova Union fee land and the Fuhrman Petroleum Corporation's Padgett 1 were the failures. Alexander-Lykes and Eastland Oil Company's Sellman 1, which is making gas with light spray of oil at 1626 feet, is the remaining threat. It is located west of the Yates field.

Shipley and associates wildcat producer is located on the Hayzlett land and near the center of Section 17, Block 5, H. & T. C. Ry. survey, and about three miles west of the Ward-Crane County line. Stidham & Thrasher, Electra contractors drilled the test with a National machine, having started operations late last July. Information regarding the porgress of this wildcat has been withheld from most of the major companies, who own leases and royalties in the district, by reason of their failure to donate acreage or dry hole money. The well is credited with having made its first head of oil late Friday, and a second flow estimated at 25 barrels was made Sunday morning. The oil is reported to have a sulphur odor somewhat similar to that found in Crane and Winkler Counties. Ten-inch casing is reported to have been landed at 770 feet, and a string of 8¼-inch will be set on top of the pay. Grand Falls, four miles south of the well, is the nearest town, while Monahans, 15 miles to the north of the well, is the nearest railroad point and direct telephone and telegraph service.

Major companies and leading inde-

WINKLER COUNTY PRORATION GAUGES

Expansion of development and changes in potential daily production since proration was applied May 5, 1928, is illustrated by the following comparative gauges:

Date gauged—	40-Acre Units	Wells	Daily Potent. Production	Daily Allow. Production
May 5	79	164	521,601	150,000
May 16	82	173	643,973	150,000
June 1	93	187	839,786	150,000
June 16	105	210	1,060,083	175,000
July 1	114	234	1,242,348	175,000
July 16	128	260	1,376,861	175,000
August 1	137	287	1,808,076	175,000
August 16	148	312	2,087,548	175,000
September 1	152	330	2,294,671	175,000
September 16	161	350	2,505,902	175,000
October 1	168	363	2,496,491	150,000
October 16	174	380	2,798,134	150,000
November 1	179	394	2,771,848	150,000

WINKLER COUNTY, TEXAS, PRORATION

Condensed proration figures compiled by Umpire Harold N. Pardee, are listed below by companies for the Hendrick, Llano and O'Brien fields, Winkler County, for the current proration period effective 7 a. m. November 1 to 15, inclusive:

Company—	Number 40-acre Units	No. Wells	Potent. Prod.	Allow. for Acreage	Allow. for Potent.	Daily Product. Allow.
Southern Crude, R. A. Westbrook & Dixie	50-3/8	90	324,605	21,104	8,779	29,883
Roxana Pet. Corp.	15	34	287,901	6,285	7,789	14,074
Roxana-Texas Co.	16	39	334,353	6,704	9,045	15,749
Magnolia Pet. Co.	2	8	1,792	838	48	886
The California Co.	2	8	19,500	838	528	1,366
C. W. Murchison & Cranfill Bros.	2¼	7	23,784	942	644	1,586
Independent O. & G. Co.	8½	17	58,802	3,561	1,591	5,152
Empire G. & F. Co.	1	1	1,800	419	49	468
Marland Prod. Co.	3	6	28,186	1,256	762	2,018
Prairie O. & G. Co.	2	5	86,128	838	2,330	3,168
Skelly Oil Co.	4	12	286,733	1,676	7,759	9,435
Pure Oil Co.	12	30	303,440	5,028	8,210	13,238
Gulf Prod. Co.	12	27	331,062	5,028	8,959	13,987
Atlantic-Collett-O'Keefe	17	40	359,520	7,123	9,729	16,852
Republic Prod. Co.	5-1/3	12	71,834	2,234	1,943	4,177
Humble O. & R. Co.	14	32	132,372	5,866	3,581	9,447
Texon Oil & Land Co.	4	10	22,090	1,676	598	2,274
Cranfill & Reynolds, Inc.	2½	8	71,535	1,047	1,935	2,982
Eastland Oil Co.	1	2	1,008	419	27	446
Winkler Oil Prod. Corp.	¼	1	700	103	19	124
Amerada Pet. Corp.	1	1	3,128	419	85	504
Sid Richardson-Kelsey et al	1	1	768	419	21	440
C. W. Murchison & T. P. Lee et al	½	1	13,848	209	375	584
Bankers Prod. Co.	⅛	1	4,451	52	120	172
Mining & Eng. Co.	¼	1	2,508	105	68	173
Units not in Prod.	1-11/12			803		803
Totals	179	394	2,771,848	74,994	74,994	149,998

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Potential production figures released by Umpire Harold N. Pardee at the close of October for Winkler County registered a decline of 26,286 barrels below the peak level credited to the field on October 15. The new figures which were determined by the gauging of 103 wells on brief open flow test and assignment of decline percentages to most of those not gauged, credit the potential with being 2,771,848 barrels from 394 producers. The number of 40-acre units on production increased to 179, thus giving the field 7,160 acres of producing area.

One well each held by Atlantic Oil Producing Company and Kessler-Logan and the Empire Gas & Fuel Company in the Llano pool, North Winkler County, accounted for 7592 barrels and 1800 barrels, respectively, of the potential production credited to the county, while Sid Richardson-White Eagle Oil & Refining Company et al's wildcat producer in the O'Brien pool earned a potential rate of 768 barrels. The latter will be allowed to run 440 barrels daily during the ensuing proration period, while the Empire well will earn a daily outlet of 468 barrels daily. Atlantic et al's producer received a quota of 624 barrels. Although this trio of producers are outside of the Hendrick field proper, they will cause 1532 barrels to be deducted from that field's maximum quota of 150,000 barrels daily, with substantial increases in sight for the reason that more than a dozen tests are getting underway in the Llano and O'Brien pools.

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Magnolia Shipments to Atlantic Coast Off; Line Runs Increase

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Including common carrier business, Magnolia Pipe Line Company deliveries to its Beaumont terminals are now averaging about 140,000 barrels daily, while total daily receipts of crude in the above five states ranges from 170,000 to 180,000 barrels but this includes oil being run for other companies and that going into field storage in West Texas and Oklahoma. However, less crude was stored during September in Oklahoma by Magnolia Petroleum Company than has been the case in more than a year. Oklahoma stocks were reported as amounting to 8,805,178 barrels at the close of September, with less than 1000 barrels increase during the month.

Almost one-half of the production and purchased oil obtained by Magnolia Petroleum Company in September came from Oklahoma fields, which contributed 1,726,888 barrels, less 34,906 barrels from Augusta, Kansas. Runs from the Wewoka-Earlsboro district passed the million barrel mark during the month. The Church & Fields area, West Texas district, is this company's largest source of crude supply in Texas, having run 345,068 barrels during September, but about one-half of this was run for purchase from The Texas Company's Landreth-strip lease on contract, which expires at the end of the year.

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Total crude runs made by Magnolia Pipe Line Company, exclusive of common carrier business, from fields in Oklahoma, Texas, Arkansas, Louisiana and Kansas during August and September, 1928, follow:

Fields—	August Totals	September Totals
Wewoka-Earlsboro	867,887	1,017,318
Healdton	250,013	227,175
Hewitt-Graham	154,807	142,477
Cushing	127,066	119,813
Seminole	120,375	91,078
Yale	48,999	44,190
Duncan	41,158	41,309
Augusta (Kansas)	38,686	34,906
Walters-Beaver Creek	9,727	8,622
Burbank	83	..
Total, Oklahoma and Kansas	1,658,801	1,726,888
Crane County	380,141	345,068
Luling	347,195	340,610
Mirando District	112,334	145,903
Roberts-Chalk (deep pay)	70,805	117,846
Panhandle District	114,659	99,678
Electra	103,900	99,350
Winkler County	105,409	76,527
Burkburnett	71,743	65,664
Lockhart-Lytton Springs	50,891	46,948
Howard Co. (shallow)	31,438	30,601
Archer County	27,957	27,086
Mexia-Wortham	29,562	26,588
Desdemona-Comanche County	19,399	18,484
Corsicana-Powell	13,872	11,977
Ranger-Olden	9,928	9,424
Corsicana (Heavy)	9,389	8,542
Stephens County	8,764	7,276
Petrolia-Clay County	2,552	2,737
Panola County	1,305	1,178
Thrall-Williamson Co.	1,077	1,086
Spindle Top-Gulf Coast	863	421
Total Texas	1,513,183	1,482,994
Smackover	85,832	79,632
Rainbow	53-458	70,977
El Dorado	15,399	14,160
East El Dorado	4,553	3,498
Total, Arkansas	159,242	168,267
Hackberry	62,192	51,613
Bull Bayou	42,880	42,840
Pine Island	30,950	30-229
Cotton Valley	25,015	22,075
Haynesville	3,884	2,870
Total, Louisiana	164,921	149,627
Total, five states	3,496,147	3,527,776

Workers Make Good Records to Win National Safety Contest

AWARDS of beautiful bronze placques to winners in the Petroleum Section contest of the National Safety Council were recently announced. The contest began February 1 and ran for six months, awards being made to seven divisions of the oil industry on their safety records.

The objective of the contest was to stimulate oil companies in their accident prevention efforts by providing them with a monthly comparison of accident experiences.

For the purpose of the contest the petroleum industry was divided into the seven following divisions:

Manufacturing	28 units
Marketing	13 units
Producing	21 units
Natural Gasoline	13 units
Pipe lines	12 units
Marine	5 units
Construction	6 units

Entries were made by units. A unit was interpreted to mean a subsidiary company, a division, or a refinery.

Producing Division

The Producing Division trophy was won by the Illinois Division of the

Pure Oil Company, which had no lost time accidents during the six months of the contest. The Illinois Division employes about 70 men. The Midwest Refining Company employing over 800 men led in this division until the final month when the Midwest Refining Company experienced six lost time accidents but the perfect record of this large producing force for five months is entitled to honorable mention.

Manufacturing Division

The Manufacturing Division trophy was won by the Bayonne Works of the Vacuum Oil Company with a frequency record of 2.63. This refinery employes an average of over 650 men. The Brunswick, Pennsylvania, plant of the Atlantic Refining Company finished second with an accident frequency rate of 3.54. However, the frequency rate of the Bayonne, Paulsboro, Olean, and Rochester plants of the Vacuum Oil Company taken collectively was 4.16. The Brunswick plant of the Atlantic Refining Company is the only plant in the Manufacturing Division having a better record that that of the plants of the Vacuum Oil Company taken collectively.

Marketing Division

The Marketing Division trophy was won by the Associated Oil Company of California by an accident frequency record of 10.20 covering the experience of over 1300 employees. It was impossible to anticipate the winner of this trophy as the Skelly Oil Company and Freedom Works Oil Company had been seesawing back and forth for first place up until the report of the final month when the Associated moved into first place.

The Natural Gasoline Division

The Natural Gasoline Division trophy was won by the Dawes-West Virginia Division of the Pure Oil Company with a no lost time record for 65 men. The Wentz Oil Division of Ponca City, Oklahoma, also went through the period of the contest without a lost time accident to their natural gasoline plant employees numbering about 35. A certificate has been provided for the Wentz Oil Division and signed by the president and managing director of the National Safety Council, indicating that they finished in second place in the contest with a perfect no lost time accident record.

The Pipe Line Division

The Pipe Line Division trophy was won by the Midwest Refining Company of Midwest, Wyoming, with a record of no lost time accidents to their 100 pipe line employees. The pipe line of the Skelly Oil Company of Tulsa, also completed the period of the contest with a record of no lost time accidents to a force of slightly less than 100 men and a certificate has been provided for them, indicating that the Skelly Pipe Line Company finished in second place with a perfect no lost time accident record.

Marine Division

The Marine Division trophy was won by the General Petroleum Corporation of California with an accident frequency rate of 10.76 with a force of about 275 men.

Construction Division

The Construction Division trophy was won by the General Petroleum Corporation of California with an accident frequency rate of 15.85 to a force of 300 construction workers.

The twenty-two companies entering units in the 1928 Petroleum Section Contest are with few exceptions, the same as those sending in a summary of accidents for 1927. Hence the contest figures and the 1927 summary figures are comparable.

DIVISION—	Units in Contest	Hours of Exposure	No Lost Time Accidents	Contest Fre. Rate	1927 Fre. Rates	Per cent De-crease	Per cent In-crease
Manufacturing	28	34,229,521	539	15.75	16.49	1.5	
Marketing	13	23,792,323	422	17.37	15.44		1.2
Producing	21	30,576,647	1,229	40.19	59.59	33.	
Natural Gasoline	13	4,283,065	64	14.94	39.65	62.	
Pipe Line	12	10,322,223	495	47.96	64.22	25.	
Marine	5	3,060,609	60	19.60	19.65	.25	
Construction	6	2,033,472	121	59.50	53.25		1.17
Grand Total	98	108,297,860	2,930	27.06	31.15	1.31	

Standard Screen Pipe Plan of Committee

Houston.—An American Petroleum Institute committee meeting on standardization of screen and strainer pipe was held here November 5, the purpose of the meeting being to formulate recommendations to be submitted to the General Standardization Committee.

M. "Bink" Manning, field superintendent in the Gulf Coast for Humble Oil & Refining Company, proposed that all screens be designated in thousandths of an inch instead of using symbolical numbers to represent different gauges. All the manufacturers present showed willingness to cooperate in the movement, and a motion incorporating the change was carried unanimously.

The question of tolerance in measurement came up, but it was decided to leave this pending while more investigation can be made on the subject.

Those attending the meeting were W. W. Scott, chairman; Fred I. Getty, J. H. McEvoy, John Teer, H. C. Smith, M. "Bink" Manning, and Carl Clemons.

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Thrall-Williamson Co.	1,077	1,086
Spindle Top-Gulf Coast	863	421
Total Texas 1	,513,183	1,482,994
Smackover	85,832	79,632
Rainbow	53-458	70,977
El Dorado	15,399	14,160
East El Dorado	4,553	3,498
Total, Arkansas	159,242	168,267
Hackberry	62,192	51,613
Bull Bayou	42,880	42,840
Pine Island	30,950	30-229
Cotton Valley	25,015	22,075
Haynesville	3,884	2,870
Total, Louisiana	164,921	149,627
Total, five states....3	,496,147	3,527,776

Workers Make Good Records to Win National Safety Contest

AWARDS of beautiful bronze placques to winners in the Petroleum Section contest of the National Safety Council were recently announced. The contest began February 1 and ran for six months, awards being made to seven divisions of the oil industry on their safety records.

The objective of the contest was to stimulate oil companies in their accident prevention efforts by providing them with a monthly comparison of accident experiences.

For the purpose of the contest the petroleum industry was divided into the seven following divisions:

Manufacturing	28 units
Marketing	13 units
Producing	21 units
Natural Gasoline	13 units
Pipe lines	12 units
Marine	5 units
Construction	6 units

Entries were made by units. A unit was interpreted to mean a subsidiary company, a division, or a refinery.

Producing Division

The Producing Division trophy was won by the Illinois Division of the

Pure Oil Company, which had no lost time accidents during the six months of the contest. The Illinois Division employes about 70 men. The Midwest Refining Company employing over 800 men led in this division until the final month when the Midwest Refining Company experienced six lost time accidents but the perfect record of this large producing force for five months is entitled to honorable mention.

Manufacturing Division

The Manufacturing Division trophy was won by the Bayonne Works of the Vacuum Oil Company with a frequency record of 2.63. This refinery employes an average of over 650 men. The Brunswick, Pennsylvania, plant of the Atlantic Refining Company finished second with an accident frequency rate of 3.54. However, the frequency rate of the Bayonne, Paulsboro, Olean, and Rochester plants of the Vacuum Oil Company taken collectively was 4.16. The Brunswick plant of the Atlantic Refining Company is the only plant in the Manufacturing Division having a better record that that of the plants of the Vacuum Oil Company taken collectively.

Marketing Division

The Marketing Division trophy was won by the Associated Oil Company of California by an accident frequency record of 10.20 covering the experience of over 1300 employees. It was impossible to anticipate the winner of this trophy as the Skelly Oil Company and Freedom Works Oil Company had been seesawing back and forth for first place up until the report of the final month when the Associated moved into first place.

The Natural Gasoline Division

The Natural Gasoline Division trophy was won by the Dawes-West Virginia Division of the Pure Oil Company with a no lost time record for 65 men. The Wentz Oil Division of Ponca City, Oklahoma, also went through the period of the contest without a lost time accident to their natural gasoline plant employees numbering about 35. A certificate has been provided for the Wentz Oil Division and signed by the president and managing director of the National Safety Council, indicating that they finished in second place in the contest with a perfect no lost time accident record.

The Pipe Line Division

The Pipe Line Division trophy was won by the Midwest Refining Company of Midwest, Wyoming, with a record of no lost time accidents to their 100 pipe line employees. The pipe line of the Skelly Oil Company of Tulsa, also completed the period of the contest with a record of no lost time accidents to a force of slightly less than 100 men and a certificate has been provided for them, indicating that the Skelly Pipe Line Company finished in second place with a perfect no lost time accident record.

Marine Division

The Marine Division trophy was won by the General Petroleum Corporation of California with an accident frequency rate of 10.76 with a force of about 275 men.

Construction Division

The Construction Division trophy was won by the General Petroleum Corporation of California with an accident frequency rate of 15.85 to a force of 300 construction workers.

The twenty-two companies entering units in the 1928 Petroleum Section Contest are with few exceptions, the same as those sending in a summary of accidents for 1927. Hence the contest figures and the 1927 summary figures are comparable.

DIVISION—	Units in Contest	Hours of Exposure	No Lost Time Accidents	Contest Fre. Rate	1927 Fre. Rates	Per cent De-crease	Per cent In-crease
Manufacturing	28	34,229,521	539	15.75	16.49	1.5	
Marketing	13	23,792,323	422	17.37	15.44		1.2
Producing	21	30,576,647	1,229	40.19	59.59	33.	
Natural Gasoline	13	4,283,065	64	14.94	39.65	62.	
Pipe Line	12	10,322,223	495	47.96	64.22	25.	
Marine	5	3.060,609	60	19.60	19.65	.25	
Construction	6	2,033,472	121	59.50	53.25		1.17
Grand Total	98	108,297,860	2,930	27.06	31.15	1.31	

Standard Screen Pipe Plan of Committee

Houston.—An American Petroleum Institute committee meeting on standardization of screen and strainer pipe was held here November 5, the purpose of the meeting being to formulate recommendations to be submitted to the General Standardization Committee.

M. "Bink" Manning, field superintendent in the Gulf Coast for Humble Oil & Refining Company, proposed that all screens be designated in thousandths of an inch instead of using symbolical numbers to represent different gauges. All the manufacturers present showed willingness to cooperate in the movement, and a motion incorporating the change was carried unanimously.

The question of tolerance in measurement came up, but it was decided to leave this pending while more investigation can be made on the subject.

Those attending the meeting were W. W. Scott, chairman; Fred I. Getty, J. H. McEvoy, John Teer, H. C. Smith, M. "Bink" Manning, and Carl Clemons.

Texas Operators Hear Sterling on Gasoline Tax

Head of highway commission explains bond proposal for building roads with gasoline tax money; officers and directors re-elected

HOUSTON.—The annual meeting of the Texas Division of the Mid-Continent Oil & Gas Association was held in Houston on November 2, the program of the day including a morning session at the Rice Hotel, where various speakers were called upon and business, including election of officers, was transacted; luncheon at River Oaks Country Club, followed in the afternoon by a golf tournament and at seven o'clock a banquet.

One of the features of the morning session was the invitation extended by Mayor W. D. Holcombe of San Angelo, for the next annual meeting of the organization to be held at San Angelo; an invitation which was later accepted.

John F. O'Donohoe of the Petroleum Producers Company, Wichita Falls, was re-elected president of the body, and list of other officers elected for the ensuing year, incorporating only one change from the list that served during the past year, is as follows: vice presidents: Edward T. Moore, Simms Oil Company, Dallas; R. W. Pack, Sun Oil Company, Beaumont; H. E. Bell, Moutray Oil Company, Abilene; W. A. Moncrief, Fort Worth; John R. Suman, Humble Oil & Refining Company, Houston; and Levi Smith, Big Lake Oil Company, Texon; treasurer: W. M. Massie, Fort Worth National Bank, Fort Worth; and secretary, J. P. Laney, Dallas.

R. S. Sterling of Houston, head of the Texas highway commission, and former head of the Humble Oil & Refining Company, was one of the principal speakers at the morning session, having been called upon to outline and discuss the plan which he is advocating for a future road-building program for the state. This discussion was requested inasmuch as the oil industry will be largely concerned in whatever plan may be pursued in the future in building highways.

Sterling's Highway Plan

Mr. Sterling's plan, modeled upon plans already being used by other states, calls for spending about $300,000,000 on Texas highways over a period of about eight years; the project to be financed by issuing bonds, with a three-cent tax on gasoline to pay the interest on the bonds and create a sinking fund for retiring them in 30 years. He said that the three-cent tax would be sufficient for putting the program through, allowing for a reasonably expected increase in gasoline consumption of five per cent. annually. Adoption of this highway building plan, generally designated as the "Sterling Plan," would require passage of a resolution by the legislature, and sanction by the voters of the state through a constitutional amendment.

Mr. Sterling pointed out that the oil industry would be called upon as collectors of the tax, but that the industry would ultimately profit through increased consumption of gasoline made possible by more and better roads. At present, he said, Texas ranks fifth in population and fortieth in the construction of roads.

Mr. Sterling's talk had been prefaced by a discussion of the same subject by J. S. Bridwell, of the Bridwell Oil Company, Wichita Falls. Other speakers at the morning session included Herbert O'Bannon of San Angelo; Charles Fitzgerald, Pure Oil Company, Dallas; J. Edgar Pew, Sun Oil Company, Dallas; and D. C. Proctor, Gulf Production Company, Fort worth.

By vote, the president was instructed to appoint a committee of five to consider and at a later meeting report on the advisability of reducing the size of the board of directors; it having been pointed out by one of the members that with the growth of the organization and an accompanying increase in the number of directors, the board had become unusually large and unwieldy. Opposition to decreasing the number of directors was expressed, however, by at least one member.

Following is a list of the directors electer for the coming year:

Directors Named

F. J. Adams, Gulf Production Company, Fort Worth;

W. N. Alexander, Continental Oil Company of Texas, Wichita Falls;

K. C. Baker, United North & South Development Company, Luling;

R. F. Baker, The Texas Company, Fort Worth;

L. E. Barrows, The Texas Company, Fort Worth;

H. E. Bell, Moutray Oil Company, Abilene;

L. J. Black, Beaumen, Texas;

E. H. Blum, Atlantic Oil Producing Company, Dallas;

Arch Bowman, Humble Oil & Refining Company, Houston;

J. S. Bridwell, Bridwell Oil Company, Wichita Falls;

E. H. Buckner, Houston Oil Company of Texas, Houston;

C. C. Cartwright, National Supply Company, Fort Worth;

J. M. Charlton, The California Company, Dallas;

Warner Clark, The California Company, Dallas;

W. D. Cline, Wichita Falls, Texas;

J. D. Collett, Fort Worth;

T. B. Cranfill, Cranfill Brothers Oil Company, Dallas;

R. A. Crawford, Lone Star Gas Company, Dallas;

John Crotty, Republic Supply Company, Houston;

Frank Cullinan, Republic Production Company, Dallas;

F. W. DeWolf, Louisiana Land & Exploration Company, Houston;

Jack Dies, Humble Oil & Refining Company, Houston;

R. L. Dudley, Gulf Publishing Company, Houston;

R. O. Dulaney, Fort Ring Oil & Gas Company, Fort Worth;

E. H. Eddleman, Wichita Falls;

F. V. Faulkner, Magnolia Petroleum Company, Dallas;

Chas. Fitzgerald, Pure Oil Pipe Line Company of Texas, Dallas;

W. H. Francis, Magnolia Petroleum Company, Dallas;

W. P. Gage, Tridex Corporation, Dallas;

Sheldon Hardin, Southern Crude Oil Purchasing Company, Fort Worth;

W. B. Hamilton, Wichita Falls;

Harry C. Hanszen, Houston;

W. M. Harrison, Star Refining & Producing Company, Fort Worth;

R. S. Haseltine, Guiberson Corporation, Dallas;

Harry Hines, Wichita Falls;

T. B. Hoffer, Hoffer Oil Corporation, Fort Worth;

J. K. Hughes, J. K. Hughes Developing Company, Mexia;

James Hutcheson, Rio Bravo Oil Company, Houston;

W. M. Irish, Atlantic Oil Producing Company, Dallas;

J. H. Jenkins, Tidal Oil Company, Fort Worth;

Roy B. Jones, Panhandle Refining Company, Wichita Falls;

C. F. Kelsey, Fort Worth;

J. A. Kemp, Wichita Falls;

Fred M. Lege, Jr., Magnolia Gas Company, Dallas;

J. F. Lucey, Lucey Petroleum Company, Dallas;

J. B. McCabe, Municipal Gas Company, Dallas;

C. B. McKinney, Houston Pipe Line Company, Houston;

J. L. McMahon, The Texas Company, Wichita Falls;

Charles McGahey, Wichita Falls;

Angus McLeod, Roxana Petroleum Corporation, Dallas;

J. Edgar Marston, Fort Worth;

Dan J. Moran, Marland Oil Company, Tulsa;

H. E. Marsh, Amerada Petroleum Corporation, Fort Worth;

W. M. Massie, Fort Worth National Bank, Fort Worth;

W. R. Mitchell, MacPherson Construction Company, Fort Worth;

W. A. Moncrief, Fort Worth;

Adrian Moore, Rycade Oil Corporation, Houston;

Edward T. Moore, Simms Oil Company, Dallas;

H. J. Morlang, Oil Well Supply Company, Fort Worth;

J. M. Mouser, Prairie Oil & Gas Company, Eastland;

Underwood Nazro, Gulf Production Company, Houston;

John F. O'Donohoe, Petroleum Producers Company, Wichita Falls;

T. T. Pendleton, Roeser & Pendleton, Fort Worth;

Robert R. Penn, Dallas;

J. Edgar Pew, Sun Oil Company, Dallas;

D. C. Proctor, Gulf Production Company, Fort Worth;

W. B. Pyron, Gulf Production Company, Fort worth;

Woodall Rodgers, Dixie Oil Company, Dallas;

J. D. Sandefer, Breckenridge;

Mel Shugert, Sinclair Oil & Gas Company, Fort Worth;

Frank M. Smith, Oriental Oil Company, Dallas;

Levi Smith, Big Lake Oil Company, Texon;

B. S. SoRelle, Pure Oil Company, Fort Worth;

John R. Suman, Humble Oil & Refining Company, Houston;

W. B. Sutton, Vacuum Oil Company, Houston;

F. L. Thomson, Grayburg Oil Company, San Antonio;

Paul Wagner, National Petroleum News, Houston;

Joseph M. Weaver, States Oil Corporation, Eastland;

J. C. Wilson, Wilson-Broach Company, Beaumont;

C. A. Young, American Petroleum Institute, Dallas;

M. F. Yount, Yount-Lee Oil Company, Beaumont.

John Wilson, president of the National Supply Company, Pittsburgh, was in Tulsa during the Petroleum Exposition.

N. T. Miles, advertising manager of the MacWhyte Company of Kenosha, Wisconsin, was among those who visited Tulsa on the occasion of the Exposition.

Jack North, representative of the Trimont Manufacturing Company's Oklahoma and Texas territories, was a visitor in Tulsa during the Exposition.

Kansas-Oklahoma Division Re-Elects Officers and Directors

TULSA.—All officials of the Kansas-Oklahoma division of the Mid-Continent Oil & Gas Association were re-elected at the annual meeting here October 24. The meeting was held at association headquarters in the Tulsa building. Organization matters and a discussion of legislative matters marked the session.

Officials re-elected are: J. C. Denton, Mid-Continent Petroleum Corporation, Tulsa, president; C. C. Herndon, Skelly Oil Company, Tulsa, first vice president; A. M. Landon, Independence, vice president for Kansas; Wirt Franklin, Ardmore, vice president for Southern Oklahoma; John H. Kane, Phillips Petroleum Company, Bartlesville; vice president for Northern Oklahoma; Harry H. Smith of Tulsa, secretary-treasurer.

The executive committee was formed by the re-election of the former members and the selection of others to fill vacancies for the year. The executive committee is composed of:

G. D. Almen, Winone Oil Company, Tulsa; Guy Berry, Big Brother Oil Company, Independence, Kansas;

Burdette Bule, Indian Territory Illuminating Oil Company, Bartlesville;

George S. Bole, Tulsa; J. H. Boyle, Chestnut & Smith Corporation, Tulsa.

Robert H. Bradford, Eldorado, Kansas;

John H. Brennan, Barnsdall Corporation, Tulsa; Frank Buttram, Buttram Petroleum Company, Oklahoma City;

Louis Campbell, Magnolia Petroleum Company, Oklahoma City;

H. H. Champlin, Champlin Refining Company, Enid;

Burt H. Collins, Echo Oil Company, Tulsa;

Fred Cook, Prairie Oil & Gas Company, Tulsa;

James K. Crawford, Quartet Oil Company, Tulsa;

William N. Davis, Phillips Petroleum Company, Bartlesville; J. C. Denton, Mid-Continent Petroleum Corporation, Tulsa;

A. L. Derby, Derby Oil Company, Wichita, Kansas;

George A. Dye, H. F. Wilcox Oil & Gas Company, Tulsa;

T. T. Eason, Healdton Oil & Gas Company, Enid;

W. W. Fleming, Mid-Kansas Oil & Gas Company, Tulsa;

W. C. Franklin, Tidal Oil Company, Tulsa;

Wirt Franklin, Wirt Franklin Petroleum Corporation, Ardmore; C. L. Freeland, Southwestern Development Company, Bristow; E. J. Gorman, Twin State Oil Company, Tulsa; John L. Gray, Shaffer Oil & Refining Company, Tulsa;

R. A. Griffith, Sinclair Oil & Gas Company, Tulsa; Charles W. Grimes, Tulsa;

Brooks Gutlius, Continental Supply Company, Tulsa;

C. C. Harmon, Nowata;

C. C. Herndon, Skelly Oil Company, Tulsa;

J. H. Hill, The Texas Company, Tulsa;

F. B. Howland, Kewanee Oil & Gas Company, Titusville, Penna.;

J. A. Hull, J. A. Hull Company, Tulsa;

P. J. Hurley, Reserve Petroleum Company, Tulsa;

R. R. Irwin, White Eagle Oil & Refining Company, Kansas City;

L. B. Jackson, Tulsa;

E. P. Jones, Okmulgee;

R. C. Jones, Josey Oil Company, Tulsa;

John H. Kane, Phillips Petroleum Company, Bartlesville;

Dana H. Kelsey, Prairie Oil & Gas Company, Independence, Kansas;

W. L. Kistler, Kistler Oil & Gas Company, Tulsa;

A. M. Landon, Independence, Kansas;

E. B. Lawson, Tulsa;

Pat Malloy, Malloy & Company, Tulsa;

John H. Markham, Jr., Tulsa;

E. W. Marland, Ponca City;

D. B. Mason, Tulsa;

J. W. McCulloch, McCulloch Oil Company, Okmulgee;

Henry McGraw, Gypsy Oil Company, Tulsa;

C. L. McMahon, Tulsa;

D. F. McMahon, Tulsa;

J. B. Milam, Chelsea;

P. M. Miskell, Empire Companies, Tulsa;

E. H. Moore, Independent Oil & Gas Company, Tulsa;

Charles F. Noble, Tulsa;

Clyde Pape, Selby Oil & Gas Company, Tulsa;

F. B. Parriott, Transcontinental Oil Company, Tulsa;

C. B. Peters, Peters Petroleum Company, Tulsa;

Waite Phillips, Tulsa;

F. A. Pielsticker, Skelly Oil Company, Eldorado, Kansas;

W. R. Ramsey, Oklahoma City;

E. B. Reeser, Barnsdall Oil Corporation, Tulsa;

James A. Green, Roxana Petroleum Corporation, Tulsa;

J. J. Shea, Tulsa;

W. G. Skelly, Skelly Oil Company, Tulsa;

T. B. Slick, Tulsa;

J. W. Sloan, International Supply Company, Tulsa;

Harry H. Smith, Tulsa;

R. H. Smith, Philadelphia, Penna.;

George Snedden, Interocean Oil Company, Tulsa;

H. R. Straight, Empire Companies, Bartlesville;

C. W. Titus, Tulsa;

James A. Veasey, Carter Oil Company, Tulsa;

J. A. Vickers, Vickers Petroleum Company, Wichita, Kansas;

P. G. Walker, Tulsa;

L. H. Wentz, Ponca City;

Max Westheimer, Westheimer & Daube, Ardmore;

C. J. Wrightman, Wrightman Oil Company, Tulsa.

PERSONAL MENTION-MEN YOU KNOW

James P. Kem, general counsel for the White Eagle Oil & Refining Company, visited the company's Casper offices for a time this week. Mr. Kem has recently come into national prominence through his successful prosecution of a protest against the federal renewal of a secret option on Salt Creek royalty oil to the Sinclair interests.

Pete R. Smith, production manager for the Pure Oil Company in the Louisiana-Arkansas district, with headquarters at El Dorado, returned early this week after accompanying the body of his wife, who died in Fort Worth October 27, to Trenton, New Jersey, for burial. Smith was chief scout for the Pure Oil Company in the Texas-New Mexico division, with headquarters at Fort Worth, before being made manager of the El Dorado district office early last September.

J. E. Willoughby, drilling superintendent for the Texon Oil & Land Company in the Big Lake field, has been transferred to Big Spring, Texas, and made field superintendent for the Howard-Glasscock County district.

Charles C. Toomey, geologist of Tulsa, has recently been elected vice president and general manager of Midco Oil Company, producers in Oklahoma and Kansas.

Paul G. Potter of the Independent Oil & Gas Company land department, Tulsa, is being transferred to the company's land department in Kansas where he will be located in the field.

Arthur W. Cutten of Chicago was elected a member of the board of directors of Sinclair Consolidated Oil Corporation October 30. As a director he succeeds P. W. Thirtle, comptroller of the company, who resigned his directorship and was made a vice president of the company.

Ed R. Perry, chairman of the board of directors of the Superior Oil Company, Tulsa, was in West Texas late in October inspecting properties of his company acquired recently through purchase of the Moody Oil Corporation of Houston. He was accompanied by J. H. O'Rear, vice president and manager of operations, and H. E. Rothrock, chief geologist, of the Superior.

Frank B. Murta, geologist of Tulsa, who recently sold his one-quarter interest in the Silurian-Houston Oil Company-Murta discovery well five miles north of Oilton, Oklahoma, left late in October for a hunting trip in the Ozark Mountain country.

George Curtis has been appointed Pittsburgh representative of the Timken Roller Bearing Company, succeeding John Young, who has been transferred from the Pittsburgh office back to the factory, at Canton. Mr. Curtis was formerly connected with the Timken office at Milwaukee.

John L. Fitzpatrick, production superintendent for the Texas Production Company, in the Big Muddy field, died at his home in Parkertown, Wyoming, last Friday. His death was the culmination of a long illness, complicated by heart disease.

O. J. Thompson, C. O. Schumaker and Charles N. Hough, Jr., of the Charles N. Hough Manufacturing Company, Franklin, Pennsylvania, left for an extended trip through the Southwestern oil fields after attending the International Petroleum Exposition at Tulsa.

"CHANGE IN FINANCE METHODS BENEFITS INDUSTRY"

AN INTERVIEW WITH HARRY H. ROGERS, TULSA BANKER

By Wallace Davis

IT is the inexperienced seaman who dreads the storm. To him an angry wind spells destruction. To the hardened skipper the angry wind is only a gale, bothersome in that it will throw the vessel off course and cause delay. As for destruction, the skipper has witnessed too many previous victories over the elements to allow doubt about reaching port.

If the petroleum industry in its present status may be likened to a ship in an unfavorable wind, Harry H. Rogers may be set up as the skipper. As banker, oil producer and civic worker, he has ridden the storms of the oil industry so long that he is sure of the outcome. There are other men of equal experience in years. Few, however, have been so placed that they have had his opportunities for close observation of the affairs of the petroleum industry.

As an oil producer, he had his baptism at Cushing. The man troubled over present conditions will be relieved after hearing Mr. Rogers relate the happenings of that day. Mr. Rogers is now president of the Exchange National Bank of Tulsa, an institution having closer connection with the oil industry than any other bank. One of his present oil connections is as an official of the McMan Oil & Gas Company.

So when he speaks of oil he speaks from a background gathered as an actor in the cast and also as an observer of the scenes.

When the conferences and conversations of oil producers bring their mental status to despair, he can match their experiences with others so much more serious that the storm they dread becomes just a small wind. The oil producer today sees his oil going on a market at a price he considers too low. But the prices of Mid-Continent oil today loom rather large compared with the 40 cents a barrel that prevailed when Cushing was pouring its flood into a country that was without the automobile.

"Besides," Mr. Rogers added, "the oil today is actually going to market. The pipe lines are taking it. Just one barrel in four could be taken at Cushing. The other three the producer could have for his own worry.

Learn From Misfortunes

"But the petroleum industry weathered Cushing and grew. Since then it has battled other oceanic storms. Each time it has come out a stronger industry." Besides this depression is not as serious as others. In 1923 conditions were more serious.

At that, he is no smiling optimist regarding the petroleum industry today. He knows prices and production are not what they should be, in the opinion of an individual oil producer. His prediction of growth and soundness comes from his calculations that the men of the petroleum industry learn something from each unfavorable condition. He knows the situation of today has taught its lessons.

"Already," he cited, "it has taught economy. It has been an excellent lesson for producers. In the future they will cling more closely to proven areas. Another reason for economy is the increased cost of drilling wells. Seminole has a well average of around $75,000. At Cushing a well could be completed for $8000. Men are cautious with money in large quantities.

"Something of value out of conditions today is the better knowledge of production and reserves. There is a concerted effort to confine well output to what the industry and the public can consume. For

the first time in the history of petroleum, the industry now has substantial reserve of crude oil and knows where it is.

"Formerly big oil fields were the result of wildcat strikes. Once found, they were drilled, regardless of season, oil in storage or general economic conditions. The great West Texas oil area, much proven but undrilled acreage in Oklahoma and other states, give the industry a known reserve. Instead of depending on wildcat strikes, these reserves can be tapped as needed."

Loyalty to the Industry

The petroleum industry with Mr. Rogers finally gets down to the men who support it. His confidence in the future comes largely because of his faith in their action. As a financier he has observed their actions under stress and he knows their metal. In no other endeavor has he seen men cling together as they have in oil. He has seen individuals broken financially in a concerted effort, when by single action they might have survived, while the cause suffered. He has seen these same individuals build back through sheer pluck and has noticed that more fortunate oil producers gave assistance. He has seen men borrow money to carry them through price depressions, rather than drill proven acreage and further flood a weakened market. He has known them to advance royalty money to land owners in order to prevent drilling.

HARRY H. ROGERS

President Exchange National Bank of Tulsa and former president of Rotary International.

"The sound sportsmanship and the unselfishness of the oil producer, from the corporation executive on down the scale," he said in tribute, "makes the solution of our present condition in oil circles a certainty. There is no other industry with such men. Competition and aggressiveness, yes! But it is a sort of competition which carries a smile and a friendly slap on the back."

Prosperity in oil circles is not restricted to the condition of oil producers in the viewpoint of this man. He has seen oil build towns, cities and sections of states. Tulsa, Wichita Falls, Houston, Fort Worth, Amarillo, Beaumont and San Angelo are cities to which oil contributed materially.

Any small town or city, now striving for growth from nearby oil development, may profit from what Mr. Rogers has observed. Above every other asset, he recommends a good hotel. Other conditions, such as location and transportation, play a part, but he has seen these rendered of little value because of excellent accommodations for the oil producer.

Why Oil Towns Grow

"Tulsa," he pointed out, "was little more than a muddy village when Glen Pool was at its best. There were larger towns nearer that pool. Some had better transportation facilities. But Tulsa provided the better hotel accommodations and that one factor converted it into the center of the nation's oil development."

A phase of the development of cities of the oil country is their growth in periods of low prices for crude oil. Tulsa, for instance, had material growth during and after the Cushing boom. Right now it is witnessing the completion of large office buildings, while Seminole and other pools have crude oil prices far below a satisfactory level. This condition is responsible for much speculation. Mr. Rogers has the following explanation for this:

"Small independent concerns and individual producers sell their rich leases in these flush pools to the larger companies in these periods of big well output. Profits from these transactions frequently turn into conservative investments. Real estate is one of the choicest of these conservative investments. More than half of the sales of valuable holdings to the larger companies are made in times of excessive well output.

"Then there is need for the growth of these cities in these periods of so-called depression. While prices may be down, the high yield of crude oil necessitates more extensive office and field forces for its handling. So the larger oil companies and smaller ones as well, must have larger office space. That assures the man looking for a real estate investment of tenants for his building.

"These two conditions are largely responsible for the growth of oil cities in times of low-priced oil."

Basis of Oil Loans

Repeatedly bankers have said that character is the first consideration in making a loan. The statement has had rude handling with the public, for the man seeking a loan is inclined to believe collateral is the primary consideration. But the president of the largest bank in the oil territory is ready with another statement that character is the point on which a loan is granted or denied. That is his experience in supplying capital to all manner of oil producers.

"Of equal consideration with collateral," he continued, "is ability to produce oil. The bank considering a loan on a producing property will delve just as deeply into the history of the producer's method of caring for wells and leases as it will into the present output and ultimate yield of the wells. No loan on an oil property can be any safer than the business judgment of the man to whom the money is trusted.

"At present banks are inclined to make loans where the lease owner is desirous of not drilling wells. I refer to a condition where a producer may have a proven lease. Were he to seek a loan for the purpose of drilling more wells, his chances for securing the money would not be as good as if his purpose were not to drill. The attitude of finance now is that oil should be kept under ground.

"Stored oil, however, is now as always, considered good collateral for a loan. While the crude oil purchaser commonly profits from storing oil, the producer can adopt a storage program to prevent his leases being drained by offset wells. Oil in storage is in readiness for delivery when prices advance."

Mr. Rogers believed crude oil imports to be one of the detrimental factors in the present oil depression. Utilization of domestic crude to an amount equal to imports from South America would, in his opinion, go far to relieve overburdened storage and raise prices. For this reason and others he is an advocate of a protective tariff on foreign oils.

A change of permanent benefit to the petroleum industry, as seen by this banker, is the method of financing. Only a few years back, thousands of uninformed investors poured millions into the hands of unscrupulous promoters. Most of this money was squandered. Now, however, the greater part of oil financing is through legitimate channels. The larger deals are underwritten by banks. Wildcat developments are undertaken by experienced men, who depend on the oil companies for financial support.

New Line Doubles Magnolia Gas Company's Capacity

DALLAS, Texas.—Natural gas supply for the Magnolia Gas Company's Texas-Louisiana system has been doubled through the recent completion of an extension of its trunk line from Sarepta station, Cotton Valley field in North Louisiana, to Richland Parish with 106 miles of 16-, 18- and 20-inch pipe. This system is now connected with the major natural gas producing areas in North Louisiana and Northeast Texas, and is buying in excess of 100,000,000 cubic feet daily from producers in the above two states, while it ranks among the largest marketers of natural gas in the Southwest.

Magnolia Gas Company functions primarily as a marketer of industrial gas for big consumers in Fort Worth and Dallas on its west extension, and Beaumont and Port Arthur on the original line extending to the Gulf Coast, with both industrial and domestic consumers in many of the various cities and towns along the route traversed in reaching the above major distributing points. The company is a subsidiary of the Magnolia Petroleum Company, which is in turn controlled by Standard Oil Company of New York, and headquarters are located in the Magnolia building, Dallas.

Fred M. Lege, Jr., a veteran in the natural gas industry in the Southwest, is president and actively in charge of operations for the Magnolia Gas Company. Other officials include: A. S. Hardwicks, Dallas, vice-president; R. J. Blackburn, Dallas, treasurer; E. P. Angus, Dallas, secretary; D. E. West, Dallas, assistant secretary and superintendent of stores and supplies; A. L. Bradford, Bethany, Louisiana, superintendent power plant; W. M. Murphy, Bethany, superintendent of pipe lines; and M. A. Abernathy, Bethany, superintendent of measuring department.

Large trunk lines aggregating 528 miles of 14-, 16-, 18- and 20-inch pipe have been built by the Magnolia Gas Company since its original system was started in 1924, and the system form a "T," with the stem extending to the Gulf Coast along the west of the Texas-Louisiana state line. The original gas line system built by Magnolia Gas Company consisted of about 222 miles of combination 14-, 16- and 18-inch welded pipe from Sarepta station via Latex, where connection was made with Louisiana and Northeast Texas gas fields, to Beaumont and Port Arthur. This unit was completed and put in operation February 1, 1925, and has been averaging above 50,000,000 cubic feet daily on deliveries, with main line stations at Sarepta, Latex and Magasco.

The Sarepta-Latex-Beaumont trunk line was built largely to supply fuel for large refineries operated by Magnolia Petroleum Company at Beaumont and at Magpetco, as well as to supply a market outlet for an abundant supply of gas owned by Magnolia and other operators. This project has proven to be a forward step towards conservation of natural resources, as the gas displaced a large volume of oil in supplying fuel for the above two plants, while an extension line was later built to The Texas Company's asphalt refinery at Port Neches. Having a surplus supply of gas above the requirements of the three refineries in the vicinity of Beaumont, the Magnolia Petroleum Company arranged to supply both industrial and domestic consumers in Beaumont, Port Arthur and other nearby industrial points, including the Neches power station of the Gulf States Utilities Company. This southern extension of the trunk line system has been in operation about three and one-half years without a single interruption of service to consumers.

Heavy volume of industrial business offered by Dallas, Fort Worth and intermediate points resulted in Magnolia Gas Company starting work in February, 1927, on a west extension from its Latex station with a 200-mile welded line, which was made up of a combination of 14-, 16- and 18-inch pipe. This line was put in operation about June 15, 1927, and is served with the same field gathering system as that supplying gas for the Beaumont district. The distribution of gas to industrial consumers is made by the Latex Gas Company, a subsidiary of the Magnolia Gas Company. The capacity of the Dallas-Fort Worth extension is rated at 75,000,000 cubic feet of gas daily, being about the same as the Latex-Beaumont line.

Construction work was started about May 1, 1928, by Magnolia in extending its system from Sarepta station to Richland Parish, using 41 miles of 18-inch and 40 miles of 20-inch pipe between the Sarepta and Sterlington stations. This unit has a capacity of 125,000,000 cubic feet of gas daily, while the capacity of the 55 miles line from Sarepta to Latex station is rated at 150,000,000 cubic feet daily. Twenty-five miles of 16-inch pipe was used between Sterlington and Alto, the latter point being the Richland Parish end of the line. Since a rock pressure ranging from 600 to 750 pounds is registered by the gas wells connected in the Alto district, no station has been erected, but it planned to install one in the near future.

The Sarepta-Alto extension line was built with A. O. Smith Corporation welded pipe, which was made to meet special specifications of the purchaser. This pipe was made in 30-foot lengths, and provisions made for the use of the Lege expansion joint, which was perfected by Fred M. Lege, Jr., on every sixth joint, or at 180-foot intervals. The A. O. Smith Corporation's welding crews tied in the 20-inch and 15 miles of the 16-inch pipe, while the balance of the welding was done by gangs employed by the Magnolia Gas Company. All of this pipe was pickled and prime coated at the mill, then given a

Magnolia Gas Company Main Line System.

second prime coat in the field, followed by a heavy coat of paint applied cold. The pipe was then wrapped with Carey asbestos felt, with a final coat of hardening cement paint. Edwin A. Macpherson, Fort Worth contractor, had the contract for ditching, insulation and back filling.

The four mainline stations on the Magnolia trunk line system are all equipped with C. & G. Cooper engines and compressors, and the Latex station, which serves as the key point in the system, has eight 1000 horsepower engines. Natural gasoline plants are being operated at Latex and Sarepta, and a third one at the Pine Island gathering station.

Utah County Officials Oppose Gas Line

Salt Lake City, Utah.—Carbon County commissioners have filed a protest with public utilities commission against granting a certificate of convenience and necessity for the laying of a pipe line for natural Gas to Salt Lake City. The projected line will be laid by interests identified with the Ohio Oil Company from the Hiawatha dome and Baxter Basin fields in southwestern Wyoming, to Salt Lake City and Ogden, Utah, supplying communities along the route at the same time. Those opposing the line state that it will close down a number of coal mines in northeastern Utah, and thereby work a hardship on numerous miners.

Midway Field

Taft, California.—Activity in the Midway field, particularly that section surrounding recent deep sand developments, has not shown the expected increase, despite fairly favorable developments on both Sections 7- and 8-32-23. The discovery of the new zone was accompanied by the usual excitement and subsequent developments have proved that the formation holds much promise. Operators who had previously frowned on the district as of little value obtained leases in the district. This increased leasing activity indicated a large drilling program, but actual drilling operations apparently have been postponed. A weaker market for the heavier grades of crude has affected the development of a large area.

Union Oil Company has been unable to make a commercial producer of W. P. 1, Section 27-32-23, and is drilling the well deeper on the theory that a better sand should be found around 2600 feet.

Republic Oil Company's 31 is producing about 1300 barrels, after starting off at a slightly higher rate. The well is making an unusually high gas production for a 22 gravity producer. The discovery well, No. 25, on Section 8-32-23, after producing more than 1000 barrels daily for several months, has been so badly damaged by water from another well that it has been killed for deepening. It was completed at 2755 feet, or considerably higher than No. 31. Republic Oil Company will also drill another well on Section 8 in an effort to prove that the new zone will produce uniformly over a large area.

United Gas Service Co. Extending System

Bartlesville, Oklahoma.—United Gas Service Company has completed work on a gas distributing plant at Pomona, Kansas, and work has been started for a similar system at Melvern, Kansas. This company has recently completed a gas delivery line from Cities Service Gas Company's new 20-inch main, running from the Texas Panhandle to Kansas City, to Kiowa, Kansas. The Kiowa distributing system is now under construction. United Gas Service Company is now serving Conway Springs, Clearwater and Harper, Kansas, and Arnett, Oklahoma, all domestic and industrial customers within the past year. Natural gas franchises are also held for service at Quenemo and Lyndon, Kansas.

Bee County, Texas

Houston.—In the northern part of Bee County, a gas well has been completed by Dr. W. E. Hewitt of Beeville on the C. A. Ray ranch near Pettus. The depth of the hole is said to be 2856 feet, and the production is from about 30 feet of sand. Early this week the well registered about 600 pounds pressure, and the pressure was picking up. The well came in making a large volume of gas and was spraying some oil. It is in the center of a solid block of 18,000 acres held by Dr. Hewitt and associates.

Los Angeles.—The huge surplus of gas in the Santa Fe Springs field may result in the increased use of gas for industrial and domestic fuel in the Los Angeles basin, but there is little likelihood that either the wholesale or retail price will change. The surplus probably will bring about changes in the transportation lines and may be the cause of additional construction.

Los Angeles — The Patterson-Ballagh Corporation, manufacturer of rubber protectors, has moved its offices to the Insurance Exchange Building, Los Angeles. A new manufacturing plant has been completed at Sixty-fifth and Wilmington Avenues.

Los Angeles—The Dollar Oil Company, a Nevada corporation, has acquired the control of the Henderson Drilling & Supply Company and the World Petroleum Corporation, both California corporations.

Arkansas Natural Gas Is Building More Line

Shreveport, La.—Pipe has been ordered and bids requested for construction of a 12¾-inch welded pipe line from El Dorado, Arkansas, to Emmett, Arkansas, a distance of approximately 60 miles, it was announced here this week at the headquarters of the Arkansas Natural Gas Corporation. The cost is estimated at $1,200,000, company officials said.

The new project will connect the Arkansas Natural's line from El Dorado to Monroe, Louisiana, and the new gas field in Champagnolle east of El Dorado, with the company's main line from the Pine Island field in Caddo Parish, Louisiana, to Little Rock, Arkansas, at the Trees compressor station located midway between Prescott, and Hope, Arkansas.

When this line is completed gas produced in Union County, Arkansas, will be available for the company's consumers served by its main line, it was announced. The company officials said this is done to provide for its patrons a supply of gas dependent not on one field alone but on all the available sources in the territory.

When this connecting link between El Dorado and the Trees compressor station is completed, which will be almost simultaneously with the completion of a line from the Johnson County, Arkansas, field to Little Rock, the company will have a connected pipe line system which will draw gas from all the territory around Shreveport from Richland Parish, Monroe gas fields, Johnson County, Arkansas, and Union County, Arkansas, making it possible for the company to draw gas from whichever field is most available and supply all customers under all conditions.

The right-of-way has been purchased and partly cleared. The plans call for completion of the line by January 1, 1929.

Los Angeles.—Drilling at 6275 feet in hard brown shale, Associated Oil Company's Vorhees 1 is now the deepest test ever drilled in the Potrero district. The well failed to produce in the upper sands and was continued in the hope that a productive zone would be found. Associated Oil Company has been able to complete only one successful well of four that have been drilled to the zone found productive around 4700 feet in Cypress 2. Cypress 3 has not reached the zone.

Barnsdall Earnings

Tulsa.—Earnings of Barnsdall Oil Corporation for the third quarter of 1928 amounted to $1.09 per share. This per share earning compares with 31 cents for the first and 49 cents for the second quarter. The net income of the company for the first nine months of this year totaled only $2,401,461 against $3,348,429 for the same period in 1927.

Gulf Coast Field Development Notes

Best Part of Kelso Bayou Field Yet to be Drilled

HOUSTON. — The Calcasieu Oil Company's Valery 3 appears to be the best well so far completed in the Kelso Bayou field, Cameron Parish, Louisiana. Although it came in for an initial flow of 1300 barrels per day, its production has increased and it is now flowing around 2300 barrels of pipe line oil daily through a one-half-inch choke. It has been over 20 days since the well was completed, and the fact that it is still making pipe line oil marks it as an exceptional well for the field, most of those previously drilled there having started making high percentages of water shortly after being brought in. Only two other wells in the field, Calcasieu Oil Company's Watkins 4 and one of the Yount-Lee Oil Company wells in the bayou, have remained free of water, and both of them are only small producers.

The Valery 3 is in the northeast part of the field, being the most easterly producer so far completed there, and its favorable performance has been of considerable encouragement, following completion of various tests in salt, as dry holes, or as wells making high water content. The present indication is that the best parts of the field remain yet to be drilled, both this sector in the vicinity of Valery 3 and north and east of it, and that section in the extreme west part of the present field looking good. In that western part, the Calcasieu Oil Company recently completed its Doiron 4, and it is now pumping 120 barrels net oil daily, together with considerable water.

Following completion of the above named two wells, Calcasieu Oil Company is drilling two new tests. Valery 4, east and a little north of the No. 3, is down below 1700 feet now; and Watkins 12 in the west part of the field, is drilling around 1000 feet.

The Calcasieu Oil Company (together with its associates, the Union Sulphur Company and Magnolia Petroleum Company) now has 12 producing wells at Kelso with a combined daily production of approximately 3250 barrels; while the Yount-Lee Oil Company, only other operator in the field, has around 1000 barrels daily production.

This dome is one of the most erratic and irregular in the Gulf Coast, both as to the periphery of the salt plug and as to depth and dip of the oil sands; and consequently demands utmost thoroughness in locating each test.

Yount-Lee Oil Company's holdings are confined to the bed of Kelso Bayou, and that company has not had wide choice as to its locations; and Calcasieu Oil Company heretofore has been restricted in its operations because of having to drill offsets; but the latter company in the future will have more freedom for its play.

The new, good well, Calcasieu Oil Company's Valery 3, is an example of a scientifically located test. In selecting its location the company was greatly aided by a torsion balance survey which it had made several months ago, outlining the edge of the salt. Judging only by the logs of previously drilled wells, indications would have been that the Valery 3 would be a dry hole, but the torsion balance revealed evidence to the contrary, and so was responsible for selection of the location which has proved to be well-chosen.

The degree of accuracy required in locating the Kelso Bayou wells is also exemplified in the case of Calcasieu Oil Company's new well, Doiron 4. Its location was made only 100 feet south of two tests of the Yount-Lee Oil Company which had previously been abandoned in salt. There is another case in the field where one test hit the salt and another, 50 feet away, was completed as an oil well.

Humble Completion Has Unusual High Gravity

Houston. — South Texas Petroleum Company has completed R. B. Morris 2 in the south part of the Humble field as a well of more than usual interest. It came in making 500 barrels of 41 gravity pipe line oil at 4350 feet. Completions are now rare in that field, although it ranks first among the Coastal fields in gross production for all time, having a total recovery of around 100,000,000 barrels to its credit.

Besides being a comparatively large well now for the Humble field, the new producer of the South Texas Petroleum Company is also interesting because of the high gravity of the oil it is yielding. The usual run of oil in the field ranges in gravity from 27 to 30 degrees.

South Liberty Well Makes 800 Barrels; 875 Feet

Houston.—The South Liberty field, one of the most erratic in the Gulf Coast because of the irregularity of the edge of the dome and of the oil bearing sands, furnished another surprise when Sun Oil Company's Mitchell 10, which was being drilled as a cavity well to take care of salt water, encountered an oil sand and was subsequently made a good well.

After picking up the oil sand, screen was set at a total depth of 875 feet, and the well came in flowing 800 barrels of 26 gravity pipe line oil on a one-half-inch choke. Later it was allowed to flow through a three-quarter-inch choke, and the production increased to 1500 barrels pipe line oil a day.

The well is 50 feet out of the southwest corner of Sun Oil Company's 100-acre Mitchell lease, and is less than a quarter of a mile south of Liberty Petroleum Company's Turner 1, completed recently at 1620 feet as a northeast extension of the field, and now pumping 75 barrels of 41 gravity oil per day.

The Texas Company and Gulf Production Company have acreage adjoining that on which the new Sun producer is located, and several tests are likely to be started shortly.

Sulphur Dome

Houston.—Union Sulphur Company has completed its Fee 730 at Sulphur dome, Calcasieu Parish, as the deepest producer of the field, total depth of the hole being 5705 feet. Initial production was 1200 barrels. Although this well is deeper than the others at Sulphur, the oil is practically the same gravity, testing approximately 22 degrees. The exact location of Fee 730 is 955 feet west and 58 feet south of the center of Section 29-9s-10w.

There are now eight producing wells at Sulphur dome, all owned by the Union Sulphur Company, which formerly operated the dome for sulphur production; and the daily production is around 4000 barrels. Previously completed wells are producing from three different sands: at approximately 3200, 3500, and 4000 feet, respectively.

Union Sulphur Company is operating six rigs in the field. Fee 733 is now an interesting test. It has set screen at the total depth of 3380 feet in a sand showing oil. Fee 731 is drilling at 4350 feet in gumbo; Fee 734 in gumbo and lime at 3010 feet; Fee 735 in lime and shale at 2970 feet; and Fee 737 is drilling around 2000 feet. Fee 729 and Fee 736 are derricks.

Clay Creek

Houston.—Sun Oil Company's Grote 2, first offset to its Grote 1, discovery well of the Clay Creek or Hill dome, 12 miles north of Brenham, was drilling, according to a report early this week, at 1155 feet. On the same dome Sun Company's Marcus 1 has cemented surface casing at 143 feet; and Einman 1 is rigging up; while Schirmer 2 is a location.

The discovery well is producing about 50 barrels daily from a sand at 1140-54 feet.

Houston. — Wheelock & Collins have abandoned Clark 1, located in the townsite of Luling, Caldwell County, at 3142 feet. The test hit the top of the Edwards lime at 3090 feet, and at 3142, where it was abandoned, flowed sulphur water.

Peak of 300,000 Barrels Seen for Santa Fe Springs

Intermediate zone has taken its place as a formation of merit potentially; burning well out and flowing 6,000 barrels daily

By BRAD MILLS
Staff Representative

LOS ANGELES.—Everything is set at Santa Fe Springs for receiving one of the most sudden floods of crude ever produced in California, and judging from developments to date the field will not prove a disappointment. With a perfect batting average in the Buckbee zone and the positive assurance that the intermediate zone will be a major factor, estimates of a peak production of 300,000 barrels do not seem out of line. There is still an element of doubt, as in every field before a little tested zone is extensively drilled, but this doubt is gradually disappearing in the face of one favorable development after another.

The intermediate zone, which produced so spectacularly in George F. Getty's flaming well, Nordstrum 17, has taken its place as a potential formation of unusual merit and has caused a flurry to correct estimates of the possible peak production. Other wells have cored the sand between 4600 and 5400 feet and several will set casing to test the formation. Shell Company picked up this sand at 4685 feet in G. H. N. 16 and is drilling out the cement below the 10¾-inch casing for the first production test of the formation. The well was drilled to 4792 feet. The lack of uniformity of the intermediate zone is apparent, but this inconsistency may have been caused by the fact that not all of the operators cored where they should have found the sand. By not doing so, they do not know whether they cut the zone or missed it. Although the core drill is used by all operators, some have been careless by not employing it where they though it was not necessary. Thus, for the lack of a uniform coring record, the exact status of the zone is not known.

Los Angeles.—George F. Getty's Nordstrom 17 at Santa Fe Springs has been brought under control after burning for more than six weeks.

The well is flowing 6,000 barrels through special outlets, and gives the intermediate zone in the Santa Fe Springs field a big boost in potentiality.

Texas Well Increasing

Instead of showing the customary decline, The Texas Company's Matern 2-7, completed 10 days ago with an initial production of 3850 barrels, is gradually increasing its production. The well was completed at 5820 feet, and not regarding Wilshire Oil Company's discovery well, was the first representative test of the Buckbee zone. Less than 150 feet of sand was included below the final shutoff. By steadily increasing its production from only a limited amount of sand, the well presages sensational producers when several hundred feet of zone is included.

Producing 3500 barrels of clean oil through a series of by-passes connected to huge compressors and feeding another 1000 barrels to the flames of the surface, George F. Getty's Nordstrum 17 continues one of the sensations of the field. Originally estimated as a small oil well, with gas supposedly accounting for the greater part of the flames, this unusual well, when partially harnessed, startled even the most optimistic operator. The well flowed wild for six weeks. The production at the time the well caught fire probably was more than 7000 barrels. Geologists familiar with the field state that the well is undoubtedly producing from the intermediate zone and not the Buckbee sand. With a total depth of 5409 feet, the bottom of the hole should be about 175 feet above the latter. The well probably is producing from the entire depth of the intermediate zone, however. The separation of the intermediate and Buckbee zones by a thick bed of shale practically eliminates the theory that one is the same as the other. All upper zones are separated in the same manner.

Conservation of Gas

Conservation is still a possibility in the field, but the chance for reducing production to a great extent is considered slim. Efforts have been made to agree on a curtailment of production when there is a genuine surplus of gas, but some of the operators seem inclined to abide only by the provisions referring to surplus gas. The belief that the State may take a hand, if the operators waste gas, has forced a spirit of cooperation along this line, but the possibility of radically reducing oil runs is considered vague. Regardless of the oil production, none will be wasted; and for this reason the State can not very well force a reduction of oil runs.

Shell Company has made more than 100 feet of new hole in Slusher 12, which produced for several weeks from only a few feet of the Buckbee zone. The well started flowing on a combination water shutoff and casing test and made a very good showing from 14 feet of sand. The performance of The Texas Company's Matern 2-7 insured the Shell Company that Slusher 12 would be a large well when deepened to include sufficient sand. The formal completion of Slusher 12 will be watched with interest and the outcome will have an important bearing upon the number of wells to be started when a uniformly large production is assured.

Although Wilshire Oil Company has not made public any information concerning its discovery well, it still remains an interesting producer. Variously estimated as good for amounts ranging from 2000

KETTLEMAN HILLS WELL MAKES HIGH GRAVITY OIL

LOS ANGELES.—Milham Exploration Company's Elliott 1 in the Kettleman Hills district is gauging 2,500 barrels of 60.6 gravity crude with equally as much blowing into the air. It is one of the most remarkable wells ever drilled in California and eclipses any high gravity producer in the state. Gas production is forty-two million feet.

The well blew out and ran wild for two weeks until capped a week ago. Previous estimates had placed production at only 200 barrels, and the showing under actual test was a distinct surprise.

A number of companies, including the Standard Oil Company of California, are preparing to enter the district immediately.

ELWOOD WELL MAKING 5000 BARRELS

LOS ANGELES.—Rio Grande Oil Company and Barnsdall Oil Company have completed Luton-Bell 2 in the Elwood field, with an initial production of 5,000 barrels of 39 gravity oil from 3,403 feet.

The well came in making clean oil, flowing through a small bean, and it is believed it would make twice as much if opened wide.

The well was drilled to 3403 feet, after finding the top of the oil zone at 3330 feet. A string of 8¾-inch casing was cemented at 3305 feet for the final shut off.

Elwood Acres 1, an outpost test, is also ready for a production test, having been drilled to 4352 feet. The oil sand was found at 4312 feet in this semi-wildcat test.

Doty 1, regarded as being favorably located is standing cemented at 3280 feet, after picking up the oil sand at only 3269 feet. This is only 100 feet below the point at which the sand was found in the discovery well.

to 6000 barrels, the well actually is producing about 3500 barrels and has been doing so far more than three months. By completing the well before the other operators were aware of a deeper sand, the company has succeeded in obtaining more than 300,000 barrels of oil from one well without an offset.

Every part of the field is active, with the central area claiming the most attention. Active drilling wells total 180, with many additional locations which will become drilling wells within a few weeks. New locations are being made at the rate of about 10 per week.

Three wells of more than usual interest are the Associated Oil Company's Jordan 2, Belleview Oil Company's Gros 2 and McKeon Drilling Company's York and Lockhart 1. These wells are all cemented above the Buckbee zone and will be tested during the week. Gros 1 was drilled to 6010 feet and found little more than 200 feet of the Buckbee formation.

Long Beach Holding

Long Beach again showed its ability to hang on by holding its ground with the aid of only five completions. Total initial production was 6500 barrels, while the field decline was only 6000 barrels. The best wells of the week were Hoyt and Wilson's Merritt 1, completed at 6720 feet with an initial production of 3300 barrels, Olympic Oil and Refining Company's Barham 2, a 1500-barrel well at 6825 feet, and Shell Company's Fee 4, which was recompleted with an initial production of 1500 barrels from 7988 feet.

Efforts to extend gas conservation to the Long Beach field are being made by a committee working in connection with the move to conserve Santa Fe Springs gas.

More than 160 wells are drilling in the field and no rapid decline is in sight. The long, flat decline predicted more than six months ago seems to have exactly been well placed and a similar action is expected during the next six months, barring unexpected developments.

Los Angeles.—Another favorable turn in the Richfield Oil Company's Miley-Hobson 1, a critical deep test in the Rincon field, again gives the well a chance for production at 6445 feet, after mechanical troubles had held up a test on several occasions. The well was originally drilled to 6520 feet but the hole was lost after plugging back to fish for drill pipe. The tools refused to follow the original course and a new hole was made below 5800 feet. While attempting to land a string of 6⅝-inch casing, after new hole was made to 6445 feet, the casing stuck at 5700 feet, making it necessary to cement it there. The company is attempting to clean out to bottom, preparatory to drilling deeper. The gas pressure has increased steadily, giving new hope to the possibility of production from the 6500-foot level.

Elmer Oil Company has encountered a body of oil sand between 3800 and 4000 feet in its outpost well near the Mussel Rock district. The success of this well would extend the field and lead to additional development.

Conservation Plan Submitted for Santa Fe Springs Gas

LOS ANGELES. — The regular weekly meeting of the Committee of Fifteen, appointed by the Santa Fe Springs operators to study conditions and formulate a plan whereby surplus gas may be conserved, was held here November 2.

The Committee of Three, composed of Joseph Jensen of the Associated Oil Company, J. U. Stair of the Shell Company and B. E. Parsons of the General Petroleum Corporation, recently appointed to devise a means of curtailment, laid its report before the general committee in the form of a resolution, which was adopted. The resolution follows:

"We, a Committee of Three appointed for the purpose, suggest the following resolution be recommended by the Committee on Curtailment of Santa Fe Springs Gas Production for adoption by the Santa Fe Springs operators:

"Whereas, the Governor of the State of California, through the Governor's Gas Conservation Committee, has called upon the operators in the Santa Fe Springs Field to prevent as far as possible creating and maintaining a surplus of natural gas in excess of that which can be put to beneficial use after being separated from the oil which has been produced by said gas, and

"Whereas, experience in the production of oil has demonstrated that a larger ultimate production of oil can be secured, and a greater conservation of gas effected, by flowing wells against a back pressure controlled by flow plugs or beans and

"Whereas, it has been demonstrated that natural gas performs a two-fold function in producing oil,

"1. By decreasing the viscosity of the oil occurring in the sands, and

"2. By furnishing the energy necessary to bring the oil to the well and flow said well.

"Therefore, the Committee on Curtailment of Santa Fe Springs Gas Production recommends that a uniform practice of back pressuring in all wells in the Santa Fe Springs Field be adopted for the purpose of conserving gas and materially reducing the amount of gas currently produced, so as to meet the demands of the Governor's Gas Conservation Committee and to increase the ultimate recovery of oil.

"In order to accomplish this in a manner fair and equitable to all operators and others owning wells or having an interest in the production of oil and gas therefrom, it is necessary that the procedure for gas conservation shall be uniformly accepted and followed by all operators.

Plan Proposed

"For this purpose the Committee on Curtailment of Santa Fe Springs Gas Production recommends to the operators of the Santa Fe Springs District the following plan of action:

"1. That all new wells completed at Santa Fe Springs be produced through tubing.

"2. That all wells be equipped with high pressure casing heads and fittings capable of withstanding 2000 pounds test pressure, or better.

"3. That whenever the gas production at Santa Fe Springs exceeds the usages in the field and the demands of the gas companies and the demands of repressuring and storage projects so that an actual surplus exists, each flowing well producing from zones lower than the Meyer zone shall be pinched back by a percentage of its net oil production to be set by a Control Committee, to be appointed by the Santa Fe Springs operators; the percentage cut to be uniform and applicable alike to all such wells; that each new flowing well brought in from zones below the Meyer zone be allowed to produce normally for 15 days, and that thereafter each such well shall be pinched in at the end of 15 days the total percentage cut then in effect; that said percentage cut shall be applied on the average production of the well during the last five days of said 15 day period; that if any well subject to cut shall develop pressures or mechanical conditions which prohibit the entire percentage cut then due, the company possessing such well shall make additional cuts on other wells to obtain the equivalent barrelage cut due on the well in question.

"4. That the Control Committee may change the percentage of cut at its discretion whenever the conditions warrant, by adding additional cuts or by reducing cuts already in effect, the same to be applicable alike to all wells.

"5. That the foregoing program shall be accepted in writing by all operators owning or operating wells in the Santa Fe Springs field.

"6. That upon the acceptance of the foregoing plan, the Control Committee shall issue the necessary instructions to carry this program into effect at the proper time; that the operators of the field will furnish this Committee with the necessary information as to their daily production and other pertinent data asked for by said Committee and that this Committee is authorized to call upon and be furnished by all marketing companies, pipe line companies and others running or removing oil from the Santa Fe Springs field, oil run to determine the deliveries of all operators in the field, for the purpose of establishing complete compliance with this program.

"7. That this program shall continue in effect for six months from the date set by the Control Committee for

Somebody Said It Wouldn't Weld

This picture shows part of a 20 inch line, 160 Miles Long, all *SmithWelded* Gas Line Pipe, all joints welded.

A. O. SMITH CORPORATION
Oil & Gas Field Products Division
General Offices: Milwaukee, Wisconsin
District Offices at New York, Pittsburgh, Tulsa, Houston, Los Angeles

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GAS LINE PIPE

the beginning of the curtailment. If one month prior to the end of the six month period it appears to the Control Committee that the emergency will still exist at the end of that period, the Control Committee shall so notify the Santa Fe Springs operators in order that measures may be taken to extend the period."

The repressuring plan, presented at the previous meeting was also discussed. The plan calls for the formation of a corporation to be known as the Santa Fe Springs Gas Conservation Association. This corporation will have the power to handle the surplus gas on a non-profit basis and will be composed of the operators in the field.

The committee is still working on a plan to extend the conservation program to the Long Beach field, the surplus gas only to be affected however

Fruitvale Extension Well Will Be Deepened

Bakersfield, California.—A. L. Marsten, Fruitvale operator, is not satisfied with the action of his No. 1, Section 27-29-27, and will deepen the well from 3810 feet to include more of the sand which gave a sensational performance in another part of the field. The Marsten well flowed at the rate of 125 barrels but its spasmodic action and the encroachment of sand did not present a promising outlook. The well stands as an extension of the field, even in its present condition, and its failure to produce consistently is not more important that the fact that commercial production is possible nearly a mile from the discovery well. Marsten has located another well on Section 27.

Pacific Eastern Production Company, encouraged by its recent 2500-barrel completion on Section 22, will drill at least two additional wells nearby. One has been located on Section 21 and another on Section 22. The company has placed No. 1 on the pump at 4025 feet, after plugging back from 6190 feet. This well opened up the field and was originally completed at 3850 feet. A seventh well will be started on Section 22 as soon as the necessary equipment can be assembled.

Union Avenue

Bakersfield, California. — Abandonment this week of the Pacific Eastern Production Company's KCL-A4, Section 6-30-28, gives the Union Avenue district another of a series of severe jolts. The well was drilled to 5425 feet and failed to yield an important showing at any depth. The location was southwest of the original test and failed to confirm the theory that the trend of production would be in that direction. Abandonment of KCL-A4 does not sound the death knell for the district, but it certainly does not improve its chances for production, according to geologists. The best that has been found was a fair flow of gas and a spray of heavy oil. The company's KCL-3 produced gas at a commercial rate for a short time, but the encroachment of sand caused much concern.

Los Angeles Geologists Want More Money for Survey

LOS ANGELES—The fourth annual meeting of the Pacific Coast section of the American Association of Petroleum Geologists was held at the Biltmore Hotel November 1 and 2, with more than 250 geologists in attendance. The meeting was called to order by C. R. McCollom, president.

At a business meeting, held November 2, a committee was appointed to draft a resolution requesting congress to appropriate additional funds for the United States Geological Survey. The work of this branch of the government was recognized as very important and a wider scope of activities would be beneficial. The committee appointed to draft the resolution is composed of H. R. Johnson, consulting geologist; C. R. McCollom, consulting geologist, and Hoyt S. Gale of the Gulf interests.

A discussion of Fort Worth as the next meeting place of the parent association showed the Pacific Coast members to look with favor on the Texas city.

A luncheon was given Thursday at the Biltmore. A dinner-dance Saturday evening at the Biltmore was attended by nearly all attending members.

Earl Noble of the Union Oil Company was elected president for the ensuing year. Irving Butterworth of the Standard Oil Company was elected secretary and treasurer.

The papers and lectures, in the order presented, follow:

Thursday Morning, November 1

"The Geology of the Elwood Terrace Oil Field," Frank A. Morgan, Jr.

"The Geology and Oil Production of Elk Hills, Kern County, California," J. R. Pemberton.

"Rotation of Crustal Blocks and Some Resulting Phenomena," J. E. Eaton (presented by title.)

"Recent Foramnifera from the Vicinity of Santa Catalina Island and their Relation to Fossil Foramnifera of the Los Angeles Basin," Manley L. Natland.

"The Geologic Age of the Modelo Formation," F. H. Hudson and E. K. Craig.

Thursday Afternoon, November 1

"The Topographic Relationships of the San Andreas Fault," Walter A. English.

"The Geology of the Santa Monica Mountains West of Topanga Canyon," Wayne Loel.

"Contribution to the Late Tertiary and Quaternary Stratigraphy of the San Joaquin Valley," P. P. Goudoff (presented by title.)

"The Torsion Balance in California," R. H. Miller.

"One of the Great Problems of the Pleistocene," Frederick P. Vickery.

"The New Kettleman Hills Oil Field," G. W. Corby.

Friday Morning, November 2

"Structural Problems of the Coastal Regions Between Ventura and Point Conception, California," H. R. Johnson.

"The Long Beach Oil Field," S. Sweeney.

"Storage and Repressuring in the Brea-Olinda Field," F. W. Lake.

Friday Afternoon, November 2

"Corrective Methods for Drilling Straight Holes," Martin Van Couvering.

"The Coalinga Oil Field," Andrew M. Hazard.

"The Santa Fe Springs Oil Field," Donald K. Weaver.

"Gas Conservation at Santa Fe Springs," A. C. Rubel.

"The Rincon Oil Field," L. E. Porter.

Kern Front Curtailment Situation in Tangle

Bakersfield, California.—The confusion attending the opening of the shut-in production in the Kern Front field still exists, although the operators are hopeful of reaching an agreement relative to the operation of both line wells and inside producers. Nearly all shut-in production, totaling about 18,000 barrels, was released two weeks ago with little formalities. This action caused the principal purchasing company to reduce the crude 25 cents to only 50 cents per barrel. Some of the operators reduced runs, while others continued the operation of their wells. In releasing this shut-in production, conservation received a severe jolt and promised to lead to a more serious situation. Some of the operators in the Kern Front field have contended that it was unfair to cap their wells, while other fields were allowed to produce at their maximum rate. The drilling and producing clauses in many of the leases were a bone of contention from the beginning and were interpreted by some as meaning that the leases should be operated continuously. At the present time, the field is producing at about 60 per cent of its total production.

Ventura

Ventura, California. — Associated Oil Company has successfully completed V. L. W. 8, in the Ventura field, initial production being 750 barrels from 7500 feet. This well has been watched closely, due to its great depth and the possibility of developing the lower part of the sand on a large scale. This unusual well has a string of nine-inch casing cemented at 5875 feet, with a 5¾-inch oil string cemented through perforations at 5990 feet. In addition, 2½-inch tubing was run for the initial test. The performance of the well is not considered satisfactory for such an unusual depth and does not invite still deeper drilling.

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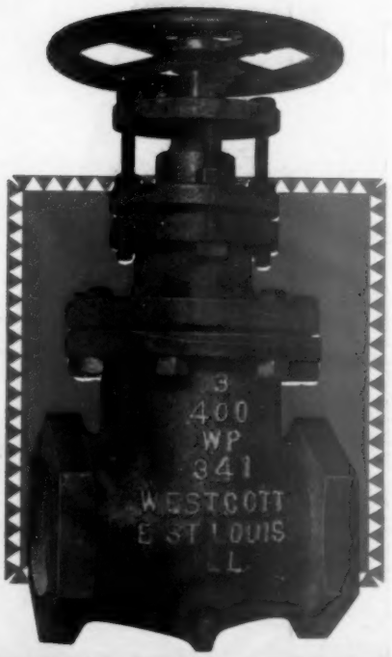

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NENTAL

Financial Success of Exposition Revealed in Final Report

TULSA.—In his final report, following the fifth International Petroleum Exposition and Congress, J. Burr Gibbons, the general manager, gave figures to show the success of the event and then made several recommendations for guidance in conducting future expositions. The report was presented to the directors November 3, 1928.

One of the interesting parts of the report came from the questionnaire which exhibitors answered. On the question of the opinion of the exposition, 30 reported it the best exposition yet held; 44 classed it very good; 20 reported it good; seven gave no answer, while two reported not enough prospects. On the question of business transacted, 63 said they had done satisfactory business, four reported fair, five reported none, three had made no sales at the time of reporting, 10 had prospective business, 11 did not expect business, while eight gave no report. The matter of satisfactory prospect lists found 94 favorable replies, three were indefinite and five gave no answer.

On actual sales, one concern reported $250,000 in business transacted; one concern had sold two carloads of equipment, one had sold $2,500; one reported $20,000; two reported $10,000; two $9,000; two $1,000; one $600; two $200, and one reported $100 or less in sales. No sales were reported in 35 answers, 43 gave no answer on the question and 10 were indefinite.

On the question of satisfaction as to general results, 101 answers were affirmative, one was indefinite and one gave no answer.

Favorable For Next Year

The estimate of the exposition was revealed in answers on the question of exhibiting equipment at the next exposition. There were 64 affirmative answers on this; 20 did not know at the time; 12 answered this as probable; two said the decision would depend on when the exposition was held; two gave no answer, while three were negative.

To the question, "should the exposition be held every year or every other year," the answers were: every year, 40; every other year, 55; indefinite, five; no answer, three.

After compiling the report from the questionnaire, the management received many other favorable comments, leaving the impression that the fifth exposition had made an even better impression than the report indicated.

The annual report showed gross receipts from the sale of space and from the gate of $132,548.61. The attendance broke previous records with 108,903 attending.

On the question of an annual exposition, Mr. Gibbons gave the directors this opinion:

"I strongly urge the continuation of the exposition as an annual event. While many exhibitors will not show annually, there are some 3,600 concerns in America which can profit from participation in the Exposition, and if but 10 per cent of these come in only once in 10 years, it should be possible to have an exposition comparable to the 1928 show in size."

Expand Internationally

He also recommended the expansion of the foreign division as follows:

"Special effort should be made to expand the international aspect of the exposition, supplementing the attendance of foreign delegates with foreign exhibits. I believe in two years time it would be possible to secure exhibits from every oil producing nation in the world, with proper help from the federal government and other important agencies, interested in the international relations and the petroleum industry. This year both Mexico and Russia had small exhibits of an educational nature, and had time permitted, we would have had a rotary outfit from Switzerland, but the time was too short to prepare the exhibit and transport it."

That the fifth exposition was a success financially was indicated in the recommendation that a fund be established for taking care of veteran workers of the petroleum Industry, through use of the surplus from the exposition. This part of Mr. Gibbon's report was:

"In the final analysis, I know of nothing finer in purpose or sentiment than to convert the ultimate profits of the exposition into a fund for the benefit of those pioneers of the industry who in the declining years of life find themselves without home or funds or in the care of relatives and interested friends. Sympathy and human understanding are inherent characteristics of the men who make up the great oil fraternity and it would be a splendid thing of the exposition could prove to be the agency through which the various pioneers of the industry may receive shelter, medical attention, financial aid and finally avoid the potters field."

Commenting later on this proposal, Mr. Gibbons said:

"The International Petroleum Exposition and Congress is a non-profit-making institution. But it is impossible to prevent it showing a surplus, something that is desirable, since it might result that an occasional exposition would show a loss. But some provision should be made for surplus and certainly no one in the petroleum industry could object to placing such a surplus in the realm of charity."

E. W. Marland Organizes New Company

Tulsa.—That E. W. Marland is not to retire from the oil business is indicated by the organization last week of Marland Estates, Inc., of Ponca City, a Delaware Corporation. A charter was granted November 3 by the secretary of state at Oklahoma City to the new concern to drill oil and gas wells. Marland Estates, Inc., will not confine its activities wholly to oil, having been granted permission also to sell real estate, deal in stocks, bonds and securities and raise and sell polo ponies. H. L. McCracken of Ponca City has been named president of the corporation.

Organization of Marland Estates, Inc., followed immediately the retirement of Mr. Marland as president of Marland Oil Company, which began its building shortly after Mr. Marland came to Oklahoma in 1912.

Seal Beach Operators Hope for Deep Pay

Los Angeles.—The hope of deep production in the Seal Beach field is still nursed by operators who are not satisfied with the action of the wells in the Selover and Wasem sands. Several wells have been completed between 6500 and 7000 feet, but none has made a spectacular demonstration. This leaves the extremely deep zone strictly in the doubtful class. Several factors have discouraged the development of this formation, chief of which are the condition of the present producing wells, the cost of drilling new wells from the surface and the belief that the sand will not be uniformly productive. George F. Getty will deepen Nos. 2 and 12, while The Texas Company has selected Lovell 1 as its test of the deep sand. This deep formation is still held in regard by some operators and it is possible that a good production will be developed. The largest completion in the zone has been a 1500-barrel producer.

Los Angeles. — Development in the Huntington Beach field is at the lowest point for several years, with both the townsite and beach areas extremely inactive. One or two companies not represented in the development of the upper zones have acquired acreage on the theory that deeper sands may prove productive. The entire field is producing about 50,000 barrels, as compared with more than 60,000 barrels a year ago. An occasional completion is effected, but the natural decline is constantly reflected in the producing column. The field will undoubtedly get a better play for a possible deeper producing sand when other more critical fields have passed the dangerous stage.

TRANSIT

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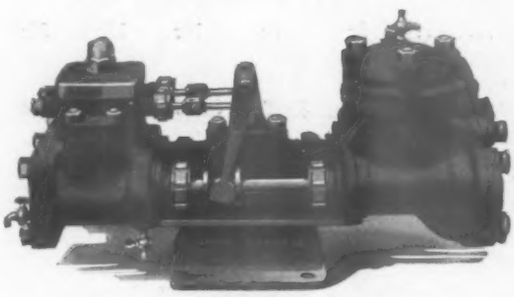

Fig. 623
Size 3 x 2 x 3"

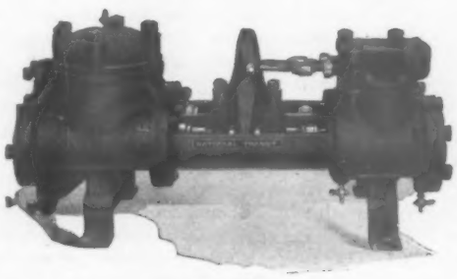

Fig. 627
Size 6 x 4 x 6"

Fig. 1100
Size 6 x 4 x 6"

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Deep Well Pumping In California

By HALLAN N. MARSH
General Petroleum Corporation

Paper read before the Petroleum Division of the American Institute of Mining and Metallurgical Engineers, Tulsa, October 18-19, 1928. *Copyright, 1928, by A. I. M. M. E. Inc.*

THE subject of this paper is apt to bring to mind wells ranging from 6000 to over 8000 feet in depth. However, it is uncommon to pump wells at depths greater than about 5000 feet. Figure 1 shows the number of wells being pumped at

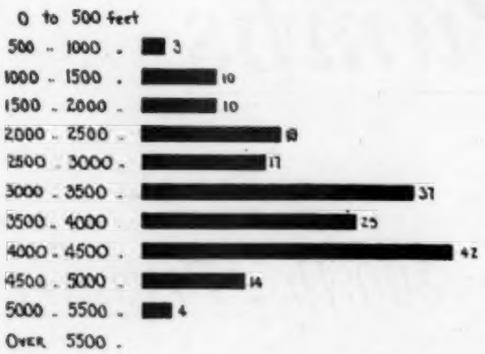

Fig 1.—*Number of wells being pumped by one company from various depths in Southern California.*

various depths by one company in Southern California. A few companies have a very few wells pumping at depths greater than this. This paper will deal with wells between 3000 and 5500 feet in depth. Most California oils at these depths are between 25 and 35 degrees gravity. The subject is so broad that it will be necessary to omit many interesting phases, and to treat others very briefly. Power, power transmission equipment, power efficiency, counter-balancing, sucker rods, pumps and volumetric efficiency will be discussed.

POWER

As a source of power, the 50 to 20 horsepower electric motor is generally preferred. Input is generally between 10 and 25 horsepower. Due to the unevenness of the load, an input of 20 horsepower on the low range is generally about all that these motors will carry without overheating, in spite of their overload capacity. In some cases the capacity of the motor limits the speed at which a well can be pumped. Where an operator has a number of wells in a group, and maintains his own transformers and distributing lines, the power rate averages in the neighborhood of one cent per kilowatt hour. This makes one horsepower cost $0.18 per day, $5.37 per month, or $65.53 per year. Energy for a motor requiring 15 horsepower input therefore costs $2.68 per day. In some localities, with large numbers of wells on one meter, the rate may go as low as six-tenths of a cent per kilowatt hour.

Gas engines still have a field of usefulness, and are preferred by a few operators. They should be of at least 40 horsepower rating. Where electric power rates are high and gas is cheap there is a power cost saving in favor of engines that may more than offset their higher maintenance. Comparisons between the costs of maintaining engines and motors are apt to be misleading because most motor installations are modern, and the majority of engine installations are more or less antiquated. Hit-or-miss governors produce an uneven motion that is certainly deleterious to belts and rods, but engines with throttling governors are practically as smooth in operations as motors. The newer engines are superior in other respects to those made 10 or 20 years ago.

Steam engines are very little used except for temporary purposes. Where electric power is expensive, and boilers must be operated anyway for other purposes, they may be the most economical source of power, and are sometimes used.

Table 1 compares the cost of power generated by motors, gas engines and steam engines, subject to the assumptions noted.

Table 1.—*Costs of Brake Horsepower.*

Cost of Electricity per kw.-hr.	0.75c	1.00c	1.50c	2.0c	3.0c
Electricity for Motor per month (Assumed efficiency 85 per cent.).	$4.75	$6.33	$9.50	$12.60	$19.00
Cost of Gas per M cu. ft. (Assumed heat value 1000 B.t.u. per cu. ft.)	5c	8c	10c	15c	35c
Gas for Gas Engine per month (Assumed efficiency 15 per cent)...	$0.61	$0.98	$1.12	$1.84	$.429
Gas for Boiler and Steam Engine per month (Assumed efficiency 4 per cent)....	2.29	3.67	4.58	6.87	16.03

POWER TRANSMISSION

Power is usually transmitted to the rods through the so-called standard rig, comprising belts, countershaft, bandwheel, crank, pitman and walking beam. The motor belt is usually six-ply rubber, 10 inches wide, and the main belt of six-ply rubber one inch wide. Many new rigs are being equipped with 12-inch motor belts and 14-inch main belts, which are expected to give more than proportionately better service. Bandwheels may be either wood or steel and are now mostly 10 feet in diameter, but new rigs are being equipped with 12-foot wheels. The latter reduce the belt tension required, and provide a greater radius for bandwheel type counterbalances.

Rig irons are of nominal six-inch size. Many of the old-fashioned wooden pitmans with babbitt and wooden block bearings are still in use, but are being gradually superseded by steel pitmans with adjustable bearings. Walking beams are mostly of wood, carried on babbitt bearings. They are not entirely satisfactory due to warping, and will probably be superseded by steel beams. This change has been delayed because some of the steel beams sold have not been of adequate strength. The total rod load is often as great as 14,000 pounds, and may be even higher. This causes a bending moment in the beam of 2,000,000 inch pounds or more. Babbitt bearings have to be replaced frequently. It is believed that the unit pressure is such as to cause an actual flow of the babbitt. The use of bronze inserts is proving a simple and satisfactory solution of this difficulty.

Double strap or cable pump adjusters with a set screw type of grip are in use. With strokes greater than 32 inches, some sort of a straight line mechanism is very desirable to minimize bending of polish rods and wear of stuffing boxes. The so-called "mulehead" comprising a pair of arc-shaped channels over which cables pull is perhaps most generally used. It is satisfactory except that the cable wears out rapidly. It can be shown geometrically that when the pivot point from which the rods hang is on top of the beam, its horizontal component of motion is 10 inches with a 40-inch stroke, whereas if the pivot point is lowered to a point on a level with the center bearing (with the beam at its midstroke) the horizontal component of its motion is only 1.2 inches. Several hangers based on this idea are in use. Rod grips involving a toggle joint or level action are coming into use. Aside from being easier to use they obviate the bending of polish rod that sometimes occurs in tightening up the set screw type of grip.

Single reduction units are now quite often used in connec-

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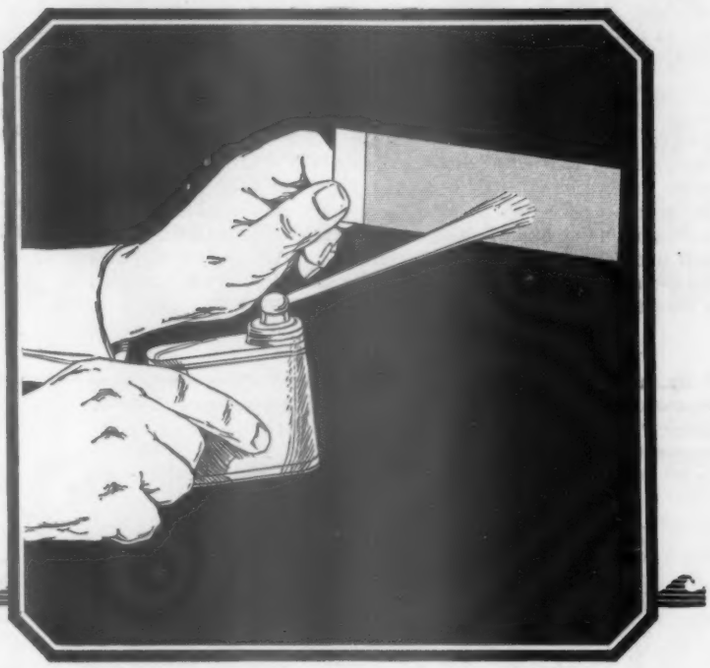

Figure 1

Here is a sheet of black iron coated with L & S Portland Cement Paint and made almost red hot with an alcohol flame. In spite of the terriffic heat, the paint does not blister in the slightest degree. No better demonstration could be made to prove toughness and quality.

Figure 2

To further test the quality of L & S Portland Cement Paint, the sheet of black iron, while still hot, is immersed in cold water. This quick change from heat to cold has absolutely no effect upon the paint film.

Firgure 3

Demonstrating the extreme toughness of L & S Portland Cement Paint. Here it has been applied to ordinary galvanized iron sheet metal, untreated in any way before the application of the paint. Note that the metal has been bent double and yet there is no evidence of a crack or fracture in the film of paint.

Figure 4

Burning an ordinary paper clip painted with L & S Portland Cement Paint to show the extraordinary character of the paint film. The paper is quickly consumed, but the paint film remains intact, often in large pieces.

L & S Portland Cement Paint contains Portland Cement combined with other pigments ground in treated oils. The result is a paint with a film so hard that it carries all the virtues of cement, yet retains a high degree of elasticity. L & S Portland Cement Paint produces a close-grained, flat finish of cement-like texture.

L & S Portland Cement Paint is a heavy bodied paint, but it has the easy working and brushing qualities common to high-grade oil paints.

L & S Portland Cement Paint dries flat, with a hard film that will not crack, chip or rub off. It has unusual tenacity and hiding power.

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Say you saw it in The OIL WEEKLY

tion with motors, taking the place of the motor belt and countershaft. Most of these are gears of spur, helical or herringbone type, but there are also chain drive and vee belt units. Some of the earlier reduction gears were unsatisfactory, due in part to the manufacturers not being familiar with the great overload capacity and underating of oil field motors, but there are now available units that are very satisfactory in operation.

Some operators are driving their bandwheels by chain instead of belt, and are apparently satisfied with the change.

Double reduction gears (or the equivalent worm gear) are being tried out on a limited scale by a few operators, and give promise of being a great improvement. The elimination of both belts, countershafts, bandwheel, bandwheel shaft and crank, is much to be desired as these parts are a great source of trouble. As soon as operators become thoroughly convinced that these reduction units are of adequate strength and durability, they will undoubtedly come into common use. A complete rig with double reduction gear costs about the same or a little less than a standard rig.

POWER EFFICIENCY

By measuring the electrical input to the motor with a watt hour-meter and the power delivered to the rods with a dynamometer, the overall above ground efficiency can be easily determined. This efficiency varies in different instances from 15 to 60 per cent., depending upon the load on the rig, the counterbalancing, and the condition of the rig as regards belt tension, alignment and lubrication. Power losses in a rig do not increase in proportion to the power throughput, so that higher loads generally result in higher efficiencies, as shown in Figure 2. Note that these are overall efficiencies, including motor losses, and that efficiency of rig alone would be higher.

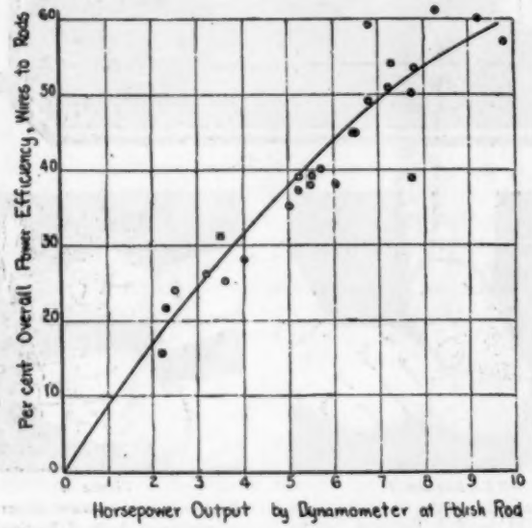

Fig. 2.—Efficiency of standard rigs for one group of wells as affected by load.

COUNTERBALANCING

During the upstroke of the rods, energy equal to the mean effective force on the upstroke times the length of stroke must be supplied to the rods. The rods in falling, return to the rig energy equal to the mean effective force on the downstroke times the length of stroke. The power required at the rods therefore fluctuates from positive to negative and back on each pump cycle. Unless a counterbalance is provided, power and power transmitting equipment adequate to supply the maximum demand on the upstroke must be provided. This is impractical and uneconomical on deep wells. The following actual case illustrates this. A certain well has a maximum rod tension of 14,200 pounds, a minimum rod tension of 4700 pounds, and a mean tension of 9000 pounds. By mean force is meant the mean force as determined from a dynamometer card by planimeter, and not merely the average of maximum and minimum tensions. If no counterbalance is provided, the rig and motor must be adequate to provide the maximum lift of 14,200 pounds, but with a counterbalancing force of 9000 pounds provided, the rig need only supply a net force of 5200 pounds.

The theoretically correct amount of counterbalance can be easily calculated. Assume the load during the upstroke to be the net weight of the rods when submerged in oil, plus the force of the fluid on the total plunger area (not deducting for rod area). The weight on the downstroke is the net weight of rods when submerged in oil (oil is standing on the standing valve). Theoretically correct counterbalance is the mean between these calculated weights for upstroke and downstroke. This has been computed for the common sizes of pump and various oil gravities, and is shown in Table 2. Note that for the common 2½-inch pump and the middle range of gravities, the figure is approximately 2.2 pounds per foot of depth.

Table 2.—Theoretically Ideal Counterbalance (Lb. per Ft. Depth; with ¾-in. Sucker Rods)

Gravity of Fluid, Deg. Be.	Nominal Pump Size 2 In.	2½ In.	3 In.
10	1.94	2.28	2.71
12	1.94	2.27	2.69
14	1.93	2.27	2.67
16	1.93	2.25	2.66
18	1.92	2.25	2.65
20	1.92	2.24	2.64
22	1.92	2.23	2.62
24	1.91	2.22	2.61
26	1.91	2.21	2.60
28	1.90	2.21	2.58
30	1.90	2.20	2.57
32	1.90	2.19	2.56
34	1.89	2.18	2.55
36	1.89	2.18	2.54

It is of value to know how reliable this theoretical figure is, and for that reason it has been compared with the correct figure as determined by dynamometer, for 10 wells picked at random. Ratios of correct counterbalance to theoretical counterbalance for these cases are as follows: 100 per cent., 98 per cent., 93 per cent., 99 per cent., 96 per cent., 93 per cent., 116 per cent., 97 per cent., 94 per cent., 93 per cent.; average, 98 per cent. Where the correct counterbalance is greater than the theoretical, it may be supposed that friction is greater on the upstroke than on the downstroke. Where less is required than calculated, it may be attributed to the lightening effect of gas in the tubing.

There are several forms of counterbalance in use. Most common of these is the well-known concrete block hanging from the walking beam, and guided either by a lever or by sliding on pipes. If hung from the beam between the pitman and Samson posts, the effectiveness of the weight is of course reduced by the ratio of the distance from center bearing to counterweight line divided by the distance from center bearing to well line. If hung from a pony beam extending out beyond the pitman, the effective force is greater than the dead weight, but the travel of the weight is so increased that acceleration is excessive, causing the suspension cable to go slack at the top of the stroke, and the force to be so great at the bottom of the stroke that it is hard to make a pony beam strong enough to carry it. These arrangements are therefore not satisfactory for heavy wells with a fast stroke.

So-called bandwheel counterbalances are in general use, comprising weights attached eccentrically to the bandwheel, with means for releasing or centralizing them while pulling the well. The effectiveness of such weights is dependent upon the length of crank stroke used, and the bandwheel diameter. With short strokes they are very efficient, and with 12-foot bandwheels they are satisfactory even for the longer strokes. The chief objection to these balances is that they put an undue load on bandwheel, shaft and crank pin, sometimes resulting in the failure of these parts.

Several different counterbalances have been built and tried which lift up directly on the polish rod or the well end of the walking beam. These have been of the weighted lever, helical spring and pneumatic types. They are all inherently unsatisfactory, because, as previously pointed out, the correct amount of counterbalance is the mean between the force on the upstroke and the force on the downstroke, and if the effectiveness of a

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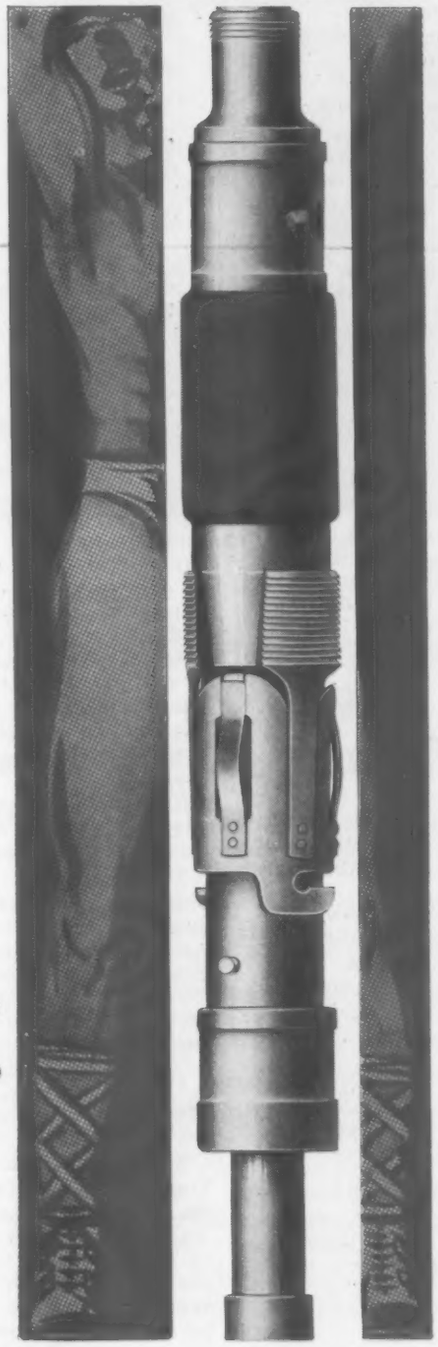

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Gas pressure, packed off from the casing with the Guiberson Control Head Packer, becomes a steady and dependable agent for forcing oil through the tubing to the surface. By this method the gas pressure is conserved, a maximum yield of oil is obtained and the life of the well is prolonged. Likewise the gravity of the oil is preserved by maintaining surface pressure in the well.

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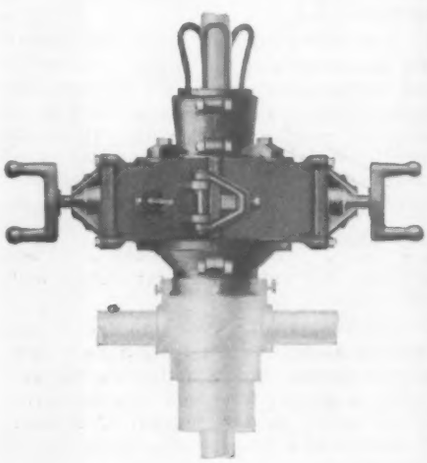

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Ample passage for oil and gas permits the Guiberson Control Head Packer to run in against heavy flows. It is easily set and may be re-set higher or lower as desired. Its valve may be opened simply by raising the tubing. It can be pulled out at will, even after long service in the well. Fully patented.

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counterbalance in this position is made greater than the force on the downstroke, the rods will tend to lift off from the beam, or the beam will tend to lift up on the Samson post. In practice, these counterbalances can not have more than about 50 per cent. of the desired effect.

A counterbalance pitman is coming into use comprising a steel pitman to which is permanently attached a shelf on which cast iron slabs may be stacked. This arrangement has obvious advantages. The chief objection seems to be that there is no advantageous leverage ratio, so that the dead weight must equal the effective weight, which should often be 10,000 pounds or more. This results not only in high first cost, but in difficult handling.

Counterbalance cranks are in use on several of the double reduction gears, and are also being tried on standard rigs. Some of them are very inadequate in amounts, but a counterbalance of this type can certainly be made adequate on special units, and perhaps also on the standard rig. They may prove it to be the best solution of the problem.

Counterbalancing merits this relatively long discussion, because it is a problem not yet satisfactorily solved, and one whose solution is essential to the efficient operation of a pumping rig. Pumping of deep wells without some counterbalance is almost impossible, and changing from a slightly inadequate counterbalance to one of correct amount has been shown by repeated tests to result in power savings of 10 to 20 per cent.

SUCKER RODS

Transmitting power from the walking beam down through a mile of crooked hole is quite a problem. This is commonly done with steel sucker rods, but the dissatisfaction with this method is attested by the many attempts at radically different methods, hydraulic, pneumatic and electric. While these methods have attractive features, it may be noted that in spite of numerous trials, all of them remain decidedly in the experimental stage. (Gas-lift which is very successful in certain circumstances, is not included in the above category, and will not be discussed in this paper). Sucker rods are commonly of ¾-inch size of the double pin and box type. Rods made to A. P. I. specifications are already coming into use, and are decidedly superior to previous types.

Figure 3 shows frequency of rod failures as a function of depth to pump. The increasing trouble at greater depths suggests that at still greater depths stronger rods will have to be used. The use of larger rods is to be avoided because their greater weight augments the already serious problem of counterbalancing. The solution will probably be in the use of alloy steel rods, or the heat-treating of carbon steel rods.

Figure 4 shows the depths at which breaks occur. The preponderance of breaks near the surface suggests that larger rods should be used for the top third of the string, and this has been tried with good results as regards elimination of failures. The increased frequency of failure at the very bottom of the string is undoubtedly due to buck-

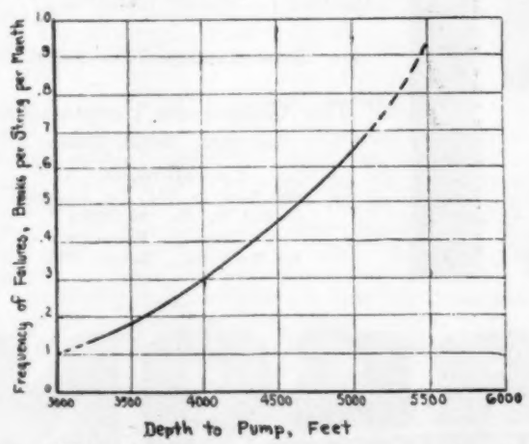

Fig. 3.—Effect of depth to pump on frequency of sucker rod failures (pumps mostly 2½ in.; rods, ¾ in.)

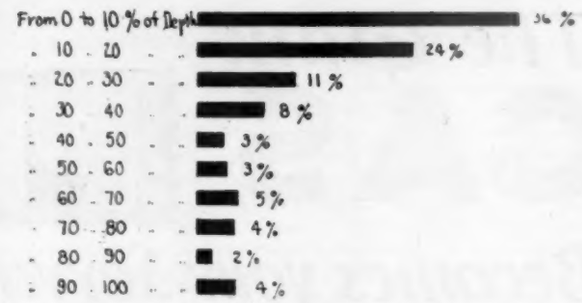

Fig. 4.—Percentage of depth to pump at which sucker rods fail.

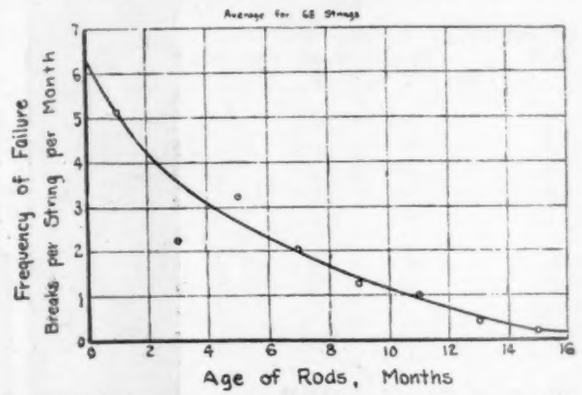

Fig. 5.—Effect of age of sucker rods on frequency of failure.

ling, caused by tight-fitting pumps. The increased frequency at about 70 per cent of the depth is difficult to explain.

Figure 5 shows the frequency of breaks as a function of the age of the rod. It is surprising that frequency of failure decreases with age. This is the opposite of what might be expected on the assumption that failures are due to fatigue. It must be concluded that there are weak rods in every string and that as these get weeded out, failures become less frequent. Classification of failures between body of rod, pin and coupling varies greatly between different makes of rods, but the average experience of one user, previous to the introduction of the A. P. I. pin is as follows: Body breaks, 48 per cent; pin brakes, 49 per cent; box breaks, 3 per cent. With A. P. I. specification rods, pin breaks are much less frequent.

The load to which rods are subjected is dependent not only upon the depth to pump, size of pump, gravity of fluid, and friction, but to the motion imparted to the rods. As a basis of calculation it may be assumed that rods move with simple harmonic motion. If this were the case, the acceleration would be

$$A = \frac{S \times N^2}{705}$$

where A = acceleration in percentage of gravity.
S = length of stroke in inches.
N = number of lifting strokes per minute.

From this it can be seen that the acceleration varies as the length of stroke, and as the square of the number of strokes per minute. For a given rod speed, the acceleration is inversely proportional to the length of stroke. This indicates the advantage of a long stroke, but unfortunately the length of stroke (with standard rig) is limited by other considerations. As a typical case, let us consider a well pumping at 25 strokes per minute with a 40-inch stroke. From the formula, the acceleration is 35 per cent gravity, which means that the tension due to the dead weight of rods and fluid would be increased 35 per cent if the whole load were given this acceleration. Fortunately, the rods and fluid have some elasticity so that the whole string of rods and column of oil is not accelerated at this rate.

Use of an eccelerometer attached to hte polish rod has

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shown that the actual maximum acceleration is always greater than the calculated acceleration, by a factor that averages around 1.80 and depends upon degree of counterbalancing, length of stroke and other variables. This apparent discrepancy is due partly to the fact that the pitman is not infinitely long, as it would have to be to give a simple harmonic motion, and also to the fact that the angular velocity of the crank varies from one part of the revolution to another.

Figure 6 shows the angular velocity of the crank as a function of its position, for two wells, one of which was driven by a steam engine and had no counterbalance, and the other was driven by an electric motor with a nearly adequate bandwheel counterbalance. It is apparent that there was much more variation of angular velocity in the first case, but even in the second case this variation was considerable. When the calculated acceleration is corrected for the finite length of the pitman, and the variation of the crank velocity, it agrees satisfactorily with that measured by the accelerometer.

These curves are plotted from moving picture data. A graduated disk is set up in front of the crank, and a pointer is attached to the crank pin so that it moves over the disk. Moving pictures are taken of this set up for one or more cycles. The position of the crank at every sixteenth of a second can be read from the developed film with a magnifying glass, and the differences of reading plotted as velocities.

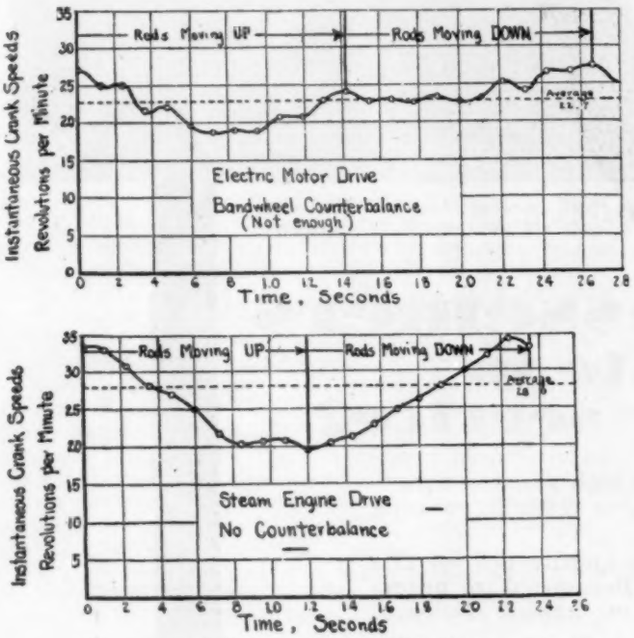


Fig. 6.—Variations of angular velocity of crank.

Figure 7 shows the actual motion of the polish rod corresponding to the crank velocity curves of Figure 6. These curves are also derived from motion picture data, the method being similar to that for determining crank velocity. A pointer is attached to the polish rod, and moves over a vertical scale held in place while pictures are taken. Subtracting each velocity observation from the preceding velocity, and dividing by the time interval gives the acceleration.

Accelerometer and moving picture data agree fairly well, and in many cases show accelerations in the neighborhood of 100 per cent gravity. Such accelerations are several times greater than are theoretically necessary, and a different mechanism might substantially reduce the acceleration and resulting rod stress. A cam to take the place of the crank has been devised and tried for this purpose, but for some reason was not successful.

The pump most commonly used is the well-known type comprising a steel plunger, working in cast iron liners

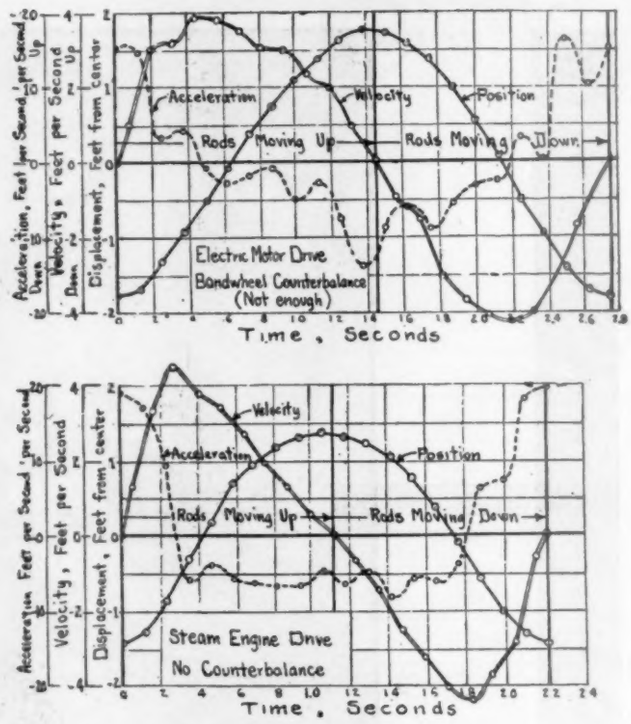


Fig. 7.—Motion of sucker rods.

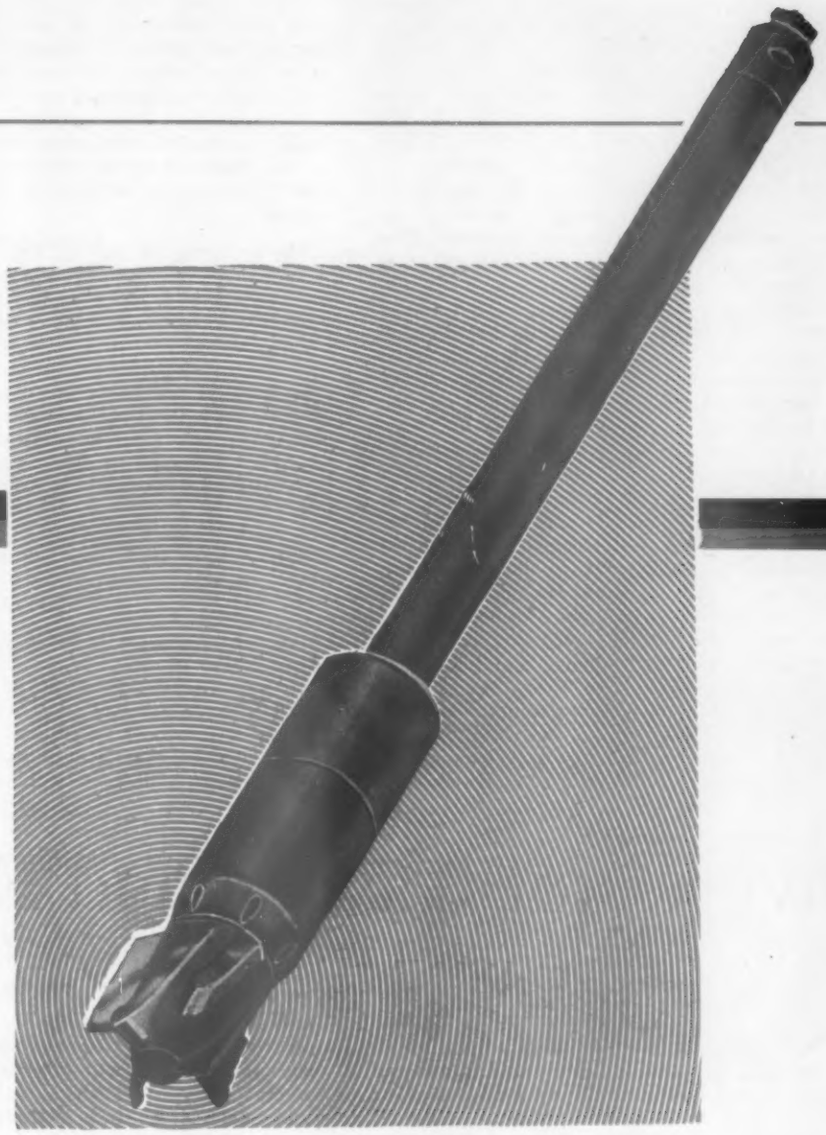
which are held between shoes in a steel jacket. Ball valves are used in plunger and barrel. For the ground steel plunger is sometimes substituted one with leather cups. Recently so-called inserted pumps have come into considerable use. The features of these is that the working barrel and standing valve as well as the plunger are pulled through the tubing on the rods. This is a real advantage in reducing the number of tubing pulling jobs. The objections to such pumps are that their size and capacity are less for any given size of tubing, and that they necessitate a leather cup plunger working in a steel barrel, instead of the generally preferred ground fit plunger. Another special type of pump is of interest in that it comprises several loose fitting concentric steel tubes of considerable length. Leakage is minimized by the length of the leakage path rather than the thinness of the path. Due to the loose fit, wear seems to be slower than with a ground fit pump, but tests indicate that due to the length of surface in sliding contact the friction is considerable, resulting in an increased power consumption.

VOLUMETRIC EFFICIENCY

Volumetric efficiencies (ratio of actual gross production to apparent pump displacement based on length of stroke of beam) range from two to 105 per cent, and average 31 per cent for the wells of one company. These figures include deep and shallow wells alike, the lower efficiencies applying to the shallower wells of very small production. That good volumetric efficiencies are possible under some conditions is shown not only by occasional wells with very high efficiencies, but by the fact that all of the wells in one field average 61 per cent.

Low volumetric efficiencies are due to three main causes: leakage past valves, plungers and tubing joints, displacement greatly in excess of the potential production of the well, and ineffective gas anchors. When pumps are in good condition and tubing is tight, leakage is almost negligible. A small leak may, however, cause low efficiency on wells of very small production. Low volumetric efficiency is often the result of pumping wells unnecessarily fast. In some cases it has been found that drastic reductions in pumping speed cause no reduction of production rate.

Probably the main obstacle to good efficiency is gas.



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Even a trace of gas, if it gets into a pump, occupies space that is thus rendered useless. For illustration, let us assume a gas-oil ratio of only 300 cubic feet per barrel, which is a lower ratio than have 90 per cent of California deep wells. This is 53 cubic feet per cubic foot. Even with a submergence giving a pressure of 50 pounds per square inch, this gas is only compressed to 12 cubic feet per cubic foot of oil, so that a volumetric efficiency of 1/(1 plus 12), or 8 per cent, is all that can be hoped for. Since there is always a clearance volume between the pump valves, the actual case is much worse than this. The necessity for an effective gas anchor wherever there is any gas is thus apparent.

The anchor in most common use consists of a joint of 2½-inch tubing below the pump, closed at its bottom end and perforated near its top end, inside of which is about 10 feet of one-inch pipe screwed into the standing valve and open at the bottom. A gravity separation of oil and gas takes place in the annular space between the two pipes. This anchor is entirely satisfactory for wells of small production and little gas, but if there is either much oil or much gas, the velocity in the downpass becomes so great that separation can not occur. In order that separation be satisfactory, the downward velocity of mixed oil and gas in the downpass must be less than the rate of slip of gas up through oil. Most of the gas will separate if this velocity is less than 6 inches per second, but for separation of the smaller bubbles, a much lower velocity is necessary. For wells of large diameter and good mechanical condition, anchors similar to the common one described above, but using larger pipe, are sometimes used, and give excellent results. However, for the wells finished with small casing, or where sand or bad casing makes it inadvisable to use an anchor of larger diameter than the pump, anchors involving special features of arrangement, and more refinement of construction are necessary in order to get adequate capacity. Several of these special types of anchors are in use, and have resulted in substantial increases of production in the majority of installations.

If pumps and their auxiliaries could be improved so that good volumetric efficiency were attainable, three-fourths of all pumping wells could be slowed down to such an extent that many mechanical difficulties would almost disappear.

CONCLUSION

In conclusion, it may be said that pumping equpiment and pumping practice is a curious mixture of the antiquated and the modern, of efficiency and inefficiency. Much of the equipment still in common use is fit only far a museum, while other equipment compares favorably with that used in the most up-to-date industries. Power efficiencies have been shown to range from 15 to 65 per cent, and volumetric efficiencies from 2 to 105 per cent. Parts of the equipment run along month after month with very little attention, and others require almost constant tinkering. California oil men have much to learn, and perhaps a little to impart, in which they are probably not much different from any other oil men.

ACKNOWLEDGMENTS

The writer is greatly indebted to W. L. McLaine of the General Petroleum Corporation of California who has made possible the preparation of this paper, and to several field men and engineers who have collaborated in the making of tests and accumulation of data upon which it is based. Among the latter should be especially mentioned J. H. Howard and B. H. Robinson.

Deliveries of Gas Oil and Fuel Oil Increase During 1927

Washington.—Deliveries of gas oil and fuel oil, during 1927, including exports and shipments to non-contiguous territories, reached a total of 381,151,000 barrels, as compared with 372,381,000 barrels in 1926, according to E. B. Swanson, economic analyst, United States Bureau of Mines, Department of Commerce, which has just completed a national survey of fuel oil distribution, in cooperation with the American Petroleum Institute. This increase of 8,770,000 barrels in total deliveries resulted from increased shipments to foreign countries, as the quantities delivered within the United States showed a slight decrease from 334,030,000 barrels in 1926 to 333,760,000 barrels in 1927.

Shipments of gas oil and fuel oil to foreign countries increased from 34,516,390 barrels in 1926 to 42,963,180 barrels in 1927, or 24.5 per cent while shipments to Alaska, Hawaii, and Porto Rico advanced from 4,104,505 barrels in 1926 to 4,427,682 barrels in 1927, an increase of 7.9 per cent. Increased shipments to North Central Europe, Mexico, Cuba, South America, China, and Japan offset the decrease in shipments to the United Kingdom, Spain, France, and Italy, and accounted for the gain in exports.

The domestic demand for gas oil and fuel oil was stimulated by the increased requirements for bunker fuel by oil-burning steamers and the increasing installations of domestic and commercial oil-buring heating plants.

Railroad purchases of fuel oil were less in 1927 than in the preceding year, as fuel-oil stocks which had been increased during 1926 were drawn upon in 1927. The actual consumption of oil by railroads for locomotive and shop fuel was slightly larger in 1927 than in 1926.

Deliveries of gas oil and fuel oil to gas and electric power plants decreased from 33,652,000 barrels in 1926 to 29,775,000 barrels in 1927. Of this decrease of 3,877,000 barrels, 2,617,000 barrels is accounted for by the decreased demand for oil as a fuel in the generation of electric power, and 1,260,000 barrels by the decrease in consumption of oil in the manufacture of artificial gas.

The consumption of oil as a fuel by petroleum refineries and producers dropped from 48,701,000 barrels in 1926 to 43,453,000 barrels in 1927. Other major decreases include the lessened requirements for general manufacturing and various smelters and steel mills. If the decrease of approximately 5,250,000 barrels in the fuel-oil requirements of the petroleum industry itself should be eliminated from this general comparison, deliveries to other industries which form the domestic fuel-oil market would show an increase in 1927 over 1926 of approximately the same amount as the decrease in feul-oil requirements of the petroleum industry. This indicates that, although there was a slight decrease in domestic deliveries of fuel oil in 1927 as compared with the preceding year, actual sales of fuel oil increased.

The Pacific Coast States continued to lead in the regional consumption of fuel oil, followed by the South Central and Middle Atlantic States. The North Central region, including mainly the States bordering the Great Lakes, showed the largest proportional increase in consumption, while the South Central and South Atlantic States showed decreases in requirements. A greater utilization of natural gas in Texas and Louisiana was mainly responsible for the decreased deliveries of fuel oil in the South Central States, while the decreased demand in the South Atlantic States was centered largely in Florida and was caused by a decrease in locomotive-fuel consumption by the single oil-burning railroad operating in that area and by the completion of certain dredging operations which had consumed relatively large quantities of fuel oil.

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Strong Show of Gas in Lower Trinity At Pine Island

SHREVEPORT, La.—A strong show of gas in what geologists and oil men believe is the lower Trinity formation and the real Trinity sand, has been found at 6099 feet in Dixie Oil Company's Robertshaw 92, in Section 13-21-15, in the Pine Island field. The well blew out at this depth, bridging over, and is now closed in but is spraying considerable gas which is leaking through the gate valve. Operators are arranging to clean out the bridge preparatory to setting 4½-inch casing.

Dixie Oil Company, in the autumn of 1924, on the same lease, uncovered the Glen Rose sand between 3600 and 3700 feet, making the first producing deep well in the territory. Geologists say that in Pine Island the Trinity formation is composed of the Glen Rose sand, the Paloxy sand and the true Trinity sand, which is believed to have been encountered in Robertshaw 92.

The strength of the show of gas is considered the most important development in North Louisiana since the discovery of the Glen Rose, as the tapping of this deeper sand opens up a vista of vast possibilities for future development not only in Pine Island but in other districts of the area.

Champagnolle Quiet

The Champagnolle district, in Union County, Arkansas, which has been the most active district in the territory for several months, continued to mark time during the week. Only one small well, a 30-barrel pumper, Magnolia Petroleum Company's Carroll 6, Section 1-17-14, completed at 2980 feet, was added in that district. Lion Oil Refining Company's C. B. Nash 4, in Section 6-17-13, on the extreme southeast edge of the northeast part of the field, completed at the end of the preceding week, was gauged during the last week as a 732-barrel well. Total depth is 3032 feet.

The new Johnson County, Arkansas, gas field in the Spadra district, is rapidly emerging from the wildcat class into the proven fields division. During the week the Arkansas Natural Gas Corporation, which owns all the producing gas wells in that area, added two more gassers; Bynum 1, Section 13-10-24, gauged eight million feet at 3126 feet, and O. L. Hudson 1, Section 14-10-24, is estimated to be making 10 million feet at 2795 feet.

North Louisiana added two gas wells, Louisiana Public Utilities Company's Rives 1, Section 14-12-12, De Soto Parish, gauged at one million feet from 1010 feet, and Feazel & Smith's Steele 1, Section 16-20-4e, Union Parish, Monroe district, which is good for 12 million feet from 2155 feet.

The Waskom district of Harrison County, Texas, also added a two million foot gasser in Nick Barbare's Furrh 5, in the Short survey, completed at 2381 feet. The Bethany gas area of Panola County also added a five million foot gasser, Natural Gas & Products' Company's Roquemore 7, in the Jordan survey, completed at 2445 ft.

Two failures recorded during the week were both in North Louisiana. Bruce Richardson's Mayfield 1, Section 20-23-9, Webster Parish, which last summer stood with several hundred feet of oil in the hole, and promised to be a connecting link between the Shongaloo gas field in Webster and the western extremity of the old Haynesville oil field which spread slightly over the Webster line from Claiborne Parish, was abandoned during the week as a salt water hole at 2776 feet. Efforts to standardize the test was fruitless.

The other Louisiana failure was Hamiter and associates' Hamiter 1, Section 10-23-12, an edge well in the Cartersville gas area of Bossier Parish, which was dry and abandoned at 1875 feet.

Of 11 new locations announced three were in Arkansas, five in North Louisiana and three in East Texas. Of the trio in Arkansas only one was in Champagnolle, Magnolia Petroleum Company now having derrick pattern for Alice Gregory 2, in the northwest of the southeast of Section 15-17-14. Union County secured another wildcat test with the announcement of location for Foster and associates' Murphy Land Company 1, in Section 22-17-17. Rigging up is now under way. In the same county Calgo Oil Company is rigging up to resume drilling in Primm 1, an old hole already down to 3001 feet.

In Nevada County, Arkansas, Humble Oil & Refining Company announced a location for J. Haynie 1, in the southwest of the northeast of Section 6-14-20.

Two new locations for wells in the Norma district of Union Parish, Louisiana, where Carter and Wingfield have five wells under way, were announced. Carter & Wingfield announced location for Hudson 3, 330 feet south and 330 feet west of the northeast corner of southeast of Section 7-23-1e. H. C. McDonald announced location for Union Sawmill 1, 660 feet west and 175 feet south of northeast corner of the southeast of Section 18-23-1e.

Odell & Lawton made location for Richardson 4, in Section 25-13-11, 2340 feet west and 2700 feet south of the northeast corner of southeast Section 24-13-11, Red River Parish.

The Spider district of De Soto and Sabine Parishes, where the Plymouth Oil Company recently abandoned a deep test below 4400 feet after getting a good show of gas around 4200 feet, will have another test, Luke Case, trustee, having announced location for Boatright 1, in Section 3-10-13.

In Ouachita Parish, Arkansas Natural Gas Corporation made location for Potts 1, in the northwest of the northwest of Section 30-19-4e.

In the Waskom gas field, Nick Barbare announced locations for Furrh 4 A-1 and Furrh 4 A-2, in the James Short survey, while in Panola County, Eureka Natural Gas Corporation announced location for Becknell 1, in the Elijah Williams survey.

Louisiana Wildcats

Among the Louisiana wildcats, Carter & Wingfield's Clark A-2, in Section 7-23-1e, Union Parish, Spadra district, held the most interest for the week. Bailing is under way with 400 feet of oil standing in the hole. Ten feet of sand was encountered. Total depth is 2295 feet. Several small producers were completed in this vicinity in 1923 and a small pipe line was recently laid to this area from Strong, Arkansas, a distance of nine miles. Carter & Wingfield are reported to have approximately 1500 barrels of oil in storage.

On the east side of the Shongaloo gas field in Webster Parish, where it nearest approaches the Haynesville field, Jones and associates are reported to have a one million foot gasser at 2690 feet in Elkins 1, Section 33-23-9. The well is shut in awaiting orders.

In the old Haynesville oil field of Claiborne Parish, where Smitherman & McDonald are drilling a deep test in Miller 1, Section 17-23-8, a test of salt water was made in the hole at 3150 feet, but was resumed and is now under way at 3240 feet.

In Tensas Parish, another rank wildcat area, Enochs and associates tested salt water in Curry 1, Section 39-11-12e with 23 feet of broken sand and total depth of 3569 feet. Arrangements are being made to go deeper.

In Upshur County, East Texas, F. S. Freeland is arranging to make drill stem test in Newsom 1 in the Butler survey, at 2020 feet. The well is a rank wildcat. Gulf Production Company in its Pickering Lumber Company 1, a wildcat in the Harvey survey of Shelby County, Texas, has set and cemented a string of 6⅝-inch casing at 3239 feet.

In Ashley County, Arkansas, Atlantic Oil Producing Company is reaming to the bottom in Moffatt 1, a wildcat in Section 28-16-8, with total depth of 3580 feet. In Calhoun County, another wildcat district, Amerada Petroleum Corporation tested dry through drill stem in Matlock 1, Section 10-12-13, at 3284 feet and is now reaming to bottom at 3400 feet.

S. D. Hunter's Sawyer 1, Section 19-18-2, Chicot County, is drilling at 3047 feet after testing dry through the drill stem from 2972 to 2991 feet.

Imperial Oil and Gas Company's Goodwin 1, a wildcat in Section 26-17-16, Union County, is being cored at 2591 feet after testing salt water from 2586 to 2591 feet.

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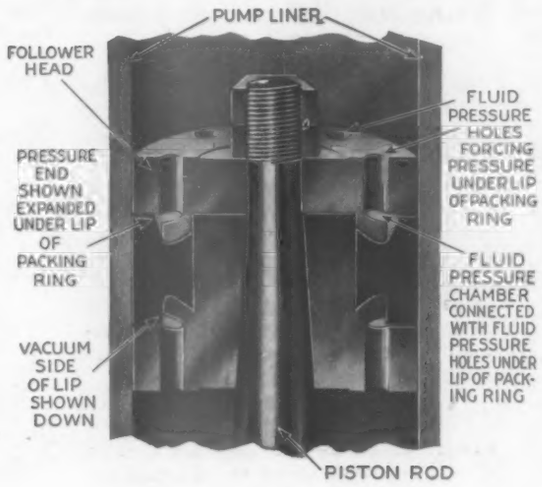
PUMP LINER
FOLLOWER HEAD
FLUID PRESSURE HOLES FORCING PRESSURE UNDER LIP OF PACKING RING
PRESSURE END SHOWN EXPANDED UNDER LIP OF PACKING RING
FLUID PRESSURE CHAMBER CONNECTED WITH FLUID PRESSURE HOLES UNDER LIP OF PACKING RING
VACUUM SIDE OF LIP SHOWN DOWN
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HOUSTON

Mountain States Field Development Notes

Conservation Committee Active In Oregon Basin

Casper, Wyo.—A questionnaire has been sent to all Oregon Basin field operators by the chairman of the conservation committee, asking for a list of wells, the daily production therefrom, offsets required, and various items of lease contracts. Upon receipt of this information the committee is to be called together for a meeting to be held either in this town, or in the field.

The Texas Company's refinery and tank farm on the Burlington railroad is being rushed to completion. Almost all of the buildings are under roof and a considerable part of the machinery is in place. The plant will be in operation by February, it is expected.

Iles Dome Well Making 1000 Barrels

Craig, Colo.—One of the best completions in the Sundance sand on Iles Dome, northwestern Colorado, is the Midwest Refining Company's Shaw 4SD, Section 27-4n-92, which is producing 1000 barrels at 3426 feet through a one-quarter-inch bean. This well is a quarter mile south of the discovery well, Parkinson 21SD; last December it produced fifteen million cubic feet of gas and 1010 barrels of crude from the Morrison sand; later it was drowned out by water, and then drilled into the Sundance. The same company's Parkinson 8SD2 on Section 23-4n-92, is producing 125 barrels of crude and five million feet of gas from the Morrison, the hole being bottomed at 3337 feet.

Northern Wyoming Test Showing Favorably

Cody, Wyo.—Another oil structure in northern Wyoming is looking good. Oregon-Wyoming Oil & Gas Company reports a showing of oil in the Embar sand in its wildcat well being drilled on Horse Center structure, northwest of the Oregon Basin field. Location is on Section 30-52-101, and the well is drilling below 850 feet, with the Amsden sand the objective. Showing was obtained in a 36-foot sand at the top of the Embar.

Open Salt Creek Royalty Oil Bids December 12

Washington.—Proposals for the purchase from the government of royalty oil accruing from leases on government lands within the Salt Creek field, Wyoming, for a period of three years beginning January 1, 1929, will be opened by the Secretary of the Interior in Washington, December 12, it has been announced. Royalty oils accruing to the government from operations in the Salt Creek field during the past two years have amounted to approximately 1,900,000 barrels per annum.

Bids must be based upon the highest posted field price for oil of like gravity in Oklahoma and Kansas, or in Wyoming, whichever is the higher, it is required by the department, and must be stated as a differential in cents per barrel from such posted price. Delivery of royalty oil will be made on each leasehold for the account of the successful bidder, who will be required to furnish a corporate surety bond in the sum of $250,000 conditioned upon full and complete compliance with the terms of its contract.

Runs on Increase From Kevin-Sunburst

Great Falls, Mont.—Pipe line runs from the Kevin-Sunburst field have shown a consistent gain during the last two months; in September the runs averaged 691 barrels per day more than in August, and the August production was 1001 barrels more than that of July. The Hibbing-Sunburst Faunce 6 and the Peerless Oil Company's Steele 1 are held responsible for the gain, since they have steadily made large production since their completion in the southeastern part of the field.

Louisiana Permits

Shreveport, La.—A total of 569 drilling permits have been issued in Louisiana for the first 10 months of the year, according to the accumulate totals announced by the minerals division of the state conservation commission here. Fifty-one new wells were authorized during October. A total of 1162 permits for all purposes were issued during the first 10 months including 53 permits to deepen, 485 to abandon, four to plug and perforate, 27 to abandon temporarily, 13 to sidetrack, five to shoot casing and six to whipstock. Five permits to deepen were issued in October along with 78 to abandon, one to shoot casing, one to plug and perforate, one to abandon temporarily and three to sidetrack.

Cody, Wyo.—The Ohio Oil Company's discovery well on Shoshone structure, east of this town, is standing with casing cemented at 4752 feet. Before the casing was run there was about 2000 feet of oil standing in the hole. Well will be drilled into completion next week. Location is on Section 27-53-101, in Park County, northern Wyoming.

Casper, Wyo.—Michael C. Weisman of Minneapolis, who has two shut-in gas wells at present on North Casper Creek structure, Section 36-36-82, Natrona County, Wyoming, has started a third well which is intended as a test to the deeper horizons, the Sundance expected at 2000 feet, and the Tensleep at 3200 feet. Mr. Weisman states that unless a very large volume of gas is encountered in the shallow horizons, the well will be completed only in the deeper sands.

Another Test Announced For Alkali Butte

Casper, Wyo.—Another test of the Alkali Butte structure in Fremont County has been announced by H. B. Gates, W. P. Holman, and associates. Location is on Section 6-33-94, on the east side of the structure, near an old well which has been standing at 853 feet for 14 years. A recent opening of this old hole resulted in a flow of oil from the Shannon sand which is 19 feet thick.

The Texas Production Company is producing about 200 barrels per day from its discovery well on Alkali Butte. A location has been made one-half mile north of the discovery well in Section 36-34-95 for a second test.

New Southern Montana Field Probable

Red Lodge, Mont.—The Ohio Oil Company's well on Dry Creek structure, Carbon County, Southern Montana, Section 11-7s-21e, is producing about eleven million cubic feet of gas, with the hole bottomed at 4458 feet. A considerable showing of high grade oil which tests 80 degrees gravity is also present. Completion of the test is delayed by a fishing job. If the well proves commercially productive a new field will have been proved in the Rocky Mountain region.

Wyatt Will Have New Plant at Houston

Houston.—The Wyatt Metal & Boiler Works has started construction here of a manufacturing plant which will have an initial floor space of 75,000 square feet. Capitalized at $1,000,000, the company already has a shop at Dallas covering 100,000 square feet of floor space. The Houston and Dallas shops together will have capacity for fabricating 25,000 tons of plates and sheets.

The Wyatt Company builds tanks of every character from steel plate, including pressure and storage tanks; refinery equipment; smoke stacks; breechings; air ducts; natural gasoline plants; and bulk storage tanks. In addition, the company builds road culverts, road strips, and all kinds of galvanized, plain and corrugated metal work.

The Houston plant will be located on the M. K. & T. and Southern Pacific tracks at Washington Avenue. It will be specially squipped with machinery for building the heavy plate work in both riveted and welded construction now required in modern refining practice.

Additional special equipment will include 36-foot bending rolls, plate planer and G. E. automatic arc welding machines. These machines will build welded steel pipe, cylinders and tanks in 36-foot lengths from a single plate and having a joint of 100 per cent. efficiency or equal strength to the solid plates.

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THE AMERICAN FLEXIBLE COUPLING FOR ROCK BIT LUBRICATORS

1 Will Keep the Lubricator from Breaking Off.

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This coupling makes a swivel connection between the watercage and the lubricator.

How many times have you had a set of ruined cones—an extra round trip to make—and a lot of lost drilling time as a result—because of loss of lubrication on your rock bit?

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American Oil Field Equipment

American Releasing and Circulating Overshots.
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American Paraffin Bits.
American Female Die Nipples.
American Tapered Taps.
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American Cone Fishing Baskets.
American Steam Lubricators.
American Combination Reverse and Throttle Levers.
American Side Tracking Mills.
American Rock Bit Wash Pipe Attachments.
American Rotary Milling Tools.
American Myracle Sucker Rod Sockets.
American Surface Bit Attachments for Rock Bits.
American Drill Pipe Float Joints.
American Pump Manifold Check Valves.
American Casing Suspension and Blowout Preventer.
American Lead Plug.
American Rock Bit Cone Fishing Sockets.

Sun to Pay Gravity Scale for Edwards Lime Oil

Luling, Texas.—Sun Oil Company has constructed a gathering system and tank car loading rack at Luling to handle the crude produced by its discovery well on the Cora Malone land, which recently established a new Edwards lime pay field in the Bruner pool, and will also purchase oil from other producers at a price that will be higher than heretofore available from majors connected by direct pipe lines with the pool. Sun Oil Company made the first crude shipment November 1, through its four-inch line and 24-car rack, moving by rail to Sun Oil Company's export terminal at Sabine Pass.

The Malone discovery well is flowing about 560 barrels of 34 gravity oil, carrying less than one per cent. sulphur, and the best posted price available has been the Luling field price of $1.00 per barrel. Sun Oil Company is to pay Mid-Continent gravity scale prices to royalty owners, and has contracted to run the oil produced by the Golden West Oil Company and other producers in the deep pay. It is planned to load about 10 tank cars daily, or more as the supply becomes available.

Magnolia Looping South Oklahoma Line

Dallas, Texas. — Magnolia Pipe Line Company has started work on a five-mile eight-inch loop between Purcell and Duncan stations in Southern Oklahoma, to increase the daily capacity of its main line to 55,000 barrels from Purcell to Beaumont. The company has two eight-inch and a short eight-inch loop between the above two points, and the new work will lengthen the loop.

In connection with this effort to give more pipe line capacity out of Oklahoma, Magnolia Pipe Line Company is adding a 100 horsepower engine and a 7000-barrel capacity pump to the present equipment at Duncan, Ringgold and Alvord stations. The latter two being in North Texas.

Pondera

Conrad, Mont.—There were two average wells completed in the Pondera field last week, 28 were drilling, and four were rigging up. Crews are busy preparing for winter — building boiler houses, burying flow lines, putting in steam boxes, remodeling camps, etc. A snow storm was the first harbinger of winter.

West Texas Production

WINKLER COUNTY

	Producing Wells	Average Prod.
Hendrick-Llano-O'Brien—		
Southern Crude and R. A. Westbrook	67	*19,290
Roxana Pet. Corp. & The Texas Co.	40	*15,165
Gulf Production Company	27	*14,235
Roxana Petroleum Corporation	35	*13,595
Pure Oil Company	31	*13,265
Atlantic Oil Producing Co.	28	*9,795
Humble Oil & Refining Co.	34	*8,395
Skelly Oil Company	13	*8,315
Atlantic & Collett-O'Keefe	12	*7,770
Southern Crude & Dixie Oil Co.	31	*5,680
Republic Production Co.	13	*4,490
Murchison & Cranfill Bros. Oil Co.	8	*3,965
Independent Oil & Gas Company	18	*3,955
Cranfill & Reynolds, Inc.	8	*3,630
Prairie Oil & Gas Company	6	*3,285
Texon Oil & Land Company	11	*2,175
Marland Production Company	6	*1,570
Sid Richardson et al	1	1,190
The California Company	8	*945
Magnolia Petroleum Company	8	935
Eastland Oil Company et al	3	*665
Atlantic & Kessler-Logan	1	*595
Amerada Petroleum Corp.	1	*520
Clint W. Murchison & T. P. Lee	2	*505
Empire Gas & Fuel Company	1	*490
El Paso (Bankers) Production Co.	1	*175
Arizona Mining & Eng. Co.	1	*20
Winkler Oil Producing Corp.	1	-----
Total	416	144,615

CRANE COUNTY

Church & Fields—		
The Texas Company (was Landreth)	16	6,715
Simms Oil Co. & Atlantic Oil Prod. Co.	32	4,905
Prairie Oil & Gas Company	12	3,540
Tidal Oil Co. & Turman-Maxwell	25	3,100
Warner-Quinlan Co. of Texas	27	2,980
Magnolia Petroleum Company	33	2,885
Humble Oil & Refining Co.	14	2,510
Gulf Production Company	11	1,390
Independent Oil & Gas Co.	7	1,310
Church-Fields et al	4	460
The Texas Company	3	355
T. P. Coal & Oil Company	1	50
Stidham & Thrasher	1	10
Total	186	30,210
Gulf-McElroy—		
Gulf Production Company	66	13,550
Gulf-Waddell	1	15
Miscellaneous	26	600
Totals for Crane County	279	44,375

REAGAN COUNTY

	Producing Wells	Average Prod.
Big Lake Oil Company	148	13,835
Texon Oil & Land Company	79	3,795
Skelly Oil Co. & Utah Southern	1	30
The California Company	1	15
Total	229	17,675

PECOS COUNTY

Yates Field—		
Mid-Kansas-Transcontinental Oil Co.	97	*37,335
Gulf Production Company	30	*9,865
Gulf Prod. Co. (Crockett County)	3	270
The California Company	37	*8,745
Simms Petroleum Company	7	*4,050
Roxana Petroleum Corporation	23	*3,515
McMan O.&G. Co. & Marland Prod. Co.	17	*3,275
McMan Oil & Gas Company	9	*2,485
Humble Oil & Refining Co.	15	*2,380
Marland Production Company	10	*860
A. L. Hawse et al (was Oil Operators)	7	760
Madza Oil Corp. & Savoy Oil Co.	3	*225
Kirby Pet. Co. & Edson Pet. Co.	2	220
Matador Oil Company	2	*-----
Red Bank Oil Company	4	*150
Grayburg Oil Co. & T. Word	3	*110
Skelly Oil Company	1	100
Phillips Petroleum Co.	1	80
Cosby Drilling Co.	1	*-----
Kirby Petroleum Company	1	45
Dixie Oil Co. (Crockett County)	1	20
Total	273	74,490

MISCELLANEOUS

Howard County	211	*32,760
Upton County	284	10,705
Jones County	45	3,510
Mitchell County	141	2,475
Crockett County	40	2,460
Fisher County	5	920
Runnels County	3	365
Loving County	7	295
Scurry County	5	35
Ector County	2	5
Totals	743	53,530
Total, all fields	1940	334,685
Total, previous week	1926	342,135

*Production partially pinched.

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Over 95% of all deep wells have 'em

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Bettis Advantages as Reported by Actual Users

The following excerpts are from reports made voluntarily by operators and superintendents which indicate various advantages:

"We found, when using a weight indicator, that the load going in the hole was reduced from 6 to 8 tons and coming out of the hole was reduced as much as 2 tons, by using Bettis Protectors. Lines show considerably longer life and strain is greatly reduced on derrick and drilling equipment."

"Observations of one of our wells under test show steam savings running as high as 35%. This is a big saving in fuel and amount of water to be pumped. In another well, by using Bettis Protectors, it was found unnecessary to install an additional boiler that was ordered before the Protectors were in use."

"In salvaging a 5,000-foot well we were able to pull all of the casing and use it again. It showed no wear on the inside. From 3 other wells in the same location, but not Bettis-equipped, we were unable to save but a small portion of the casing and it was so badly worn we didn't dare to use it."

"In one well the saving in collars alone was enough to pay for the Bettis Protectors. Before installing the Protectors we were cutting off and replacing collars every 3 to 5 days. After putting on the Protectors we never changed a collar and finished the well with some 90 days' drilling."

"Before installing Protectors it was almost impossible to hold pipe with brake. Our brake got so hot we couldn't stand close to it. With the installation of Bettis Protectors we can stop the pipe anywhere we want to and estimate they are taking 10 tons off in weight, going in hole. We find that the pipe rotates much easier."

"Before installing Protectors we were changing our brake bands every week. Since installation we have not changed a single one. The reason is that the Protectors form a float for the drill pipe, preventing pipe from dropping too fast and the strain is taken off of the brake bands."

"We drilled 60 feet of 6¼" casing up most of the time with fish-tail bits. About 45 days were required to drill up same. There were pieces of steel as large as a dollar passing the Protectors at all times. The Protectors do not show any wear and we feel this is a most severe test."

New Catalog Now Ready

Bettis Protectors

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	Nov. 6 1928
Penna Grade Oil in New York Transit Lines (New York)	$3.45
Bradford District Oil in National Transit Lines (Pennsylvania)	3.45
Penna Grade Oil in National Transit Lines (Pennsylvania)	3.35
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	3.35
Penna Grade Oil in Eureko Pipe Line Lines (Pennsylvania)	3.25
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.10
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (July 13)	1.45
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s lines (August 8)	1.70
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines (Aug. 8)	1.80
Somerset Oil in Cumberland Pipe Line lines (Kentucky) (Sept. 14, 1928)	1.75
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (August 1)	.95
Keister (Pennsylvania)	1.20

CENTRAL STATES

Illinois	1.55
Indiana	1.37
Lima	1.60
Plymouth	1.28
Princeton	1.55
Waterloo	1.35
Wooster	1.77

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren.

All grades	1.75

MID-CONTINENT

Carter Oil Company, Gulf Pipe Line Company, Sinclair Pipe Line Company, Prairie Oil and Gas Company and The Texas Company.*

25. to 25.9 gravity	.67
26 to 26.9 gravity	.74
27 to 27.9 gravity	.81
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.09
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.26
35 to 35.9 gravity	1.31
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 and above	1.76

*The Texas Company posts a price of 60 cents on 24 to 24.9 gravity, and Gulf's posting begins at 28 to 28.9.

MID-CONTINENT

Magnolia Petroleum Company

Below 25 gravity	.60
25 to 25.9 gravity	.67
26 to 26.9 gravity	.74
27 to 29.9 gravity	.75
30 to 30.9 gravity	.90
31 to 31.9 gravity	1.05
32 to 32.9 gravity	1.16

From 33 to 44 gravity and above, Magnolia Petroleum Company prices are the same as those of Carter Oil Company.

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude (Humble Oil and Refining Company)*

25 to 25.9 gravity	.67
26 to 26.9 gravity	.74
27 to 27.9 gravity	.81
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.09
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.26
35 to 35.9 gravity	1.31
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 and above	1.76

SOUTH TEXAS

Mirando	1.00

SOMERSET

Grayburg

	Nov. 6 1928
Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 to $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

MARKHAM

The Texas Company

All grades	1.00

LULING

All grades	1.00

PANHANDLE GRAY COUNTY

(Humble Oil and Refining Company, Magnolia Petroleum Company, Gulf Pipe Line Company and Sinclair Pipe Line Company).

Below 29 gravity	.68
29 to 29.9 gravity	.75
30 to 30.9 gravity	.82
31 to 31.9 gravity	.89
32 to 32.9 gravity	.96
33 to 33.9 gravity	1.01
34 to 34.9 gravity	1.06
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.16
37 to 37.9 gravity	1.21
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.31
40 to 40.9 gravity	1.36

CALIFORNIA CRUDE OIL PRICES AT THE WELL

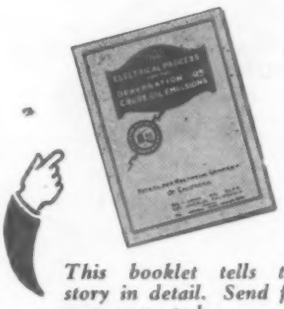
Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons ir fields indicated.

Gravity	Signal Hill	Alamitos Hts Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14.9	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ ...	$ .50	$ .75	$ .75	$ .75	$ .75	$ .75
15-15.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	...	.50	.75	.75	.75	.75	.75
16-16.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	...	.50	.75	.75	.75	.75	.75
17-17.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	...	.50	.75	.75	.75	.75	.75
18-18.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	...	.50	.75	.75	.75	.75	.75
19-19.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	...	.50	.75	.75	.75	.75	.75
20-20.9	.85	.85	.85	.85	.85	..	.85	.85	.85	.86	.85	..	..	.77	.77	.77	.77	.77
21-21.9	.89	.89	.89	.89	.89	..	.89	.89	.88	.89	.88	.89	..	.79	.79	.79	.79	.79
22-22.9	.93	.93	.93	.93	.93	..	.93	.93	.91	.92	.91	.92	..	.82	.82	.82	.82	.82
23-23.9	.97	.97	.97	.97	.97	..	.97	.97	..	.95	.94	.95	..	.86	.86	.86	.85	.85
24-24.9	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	..	.98	.97	.98	..	.90	.90	.90	.88	.88
25-25.9	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	..	1.01	1.00	1.01	..	.95	.95	.95	.91	.91
26-26.9	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	..	1.04	1.04	1.04	..	1.00	1.00	1.00	.94	.94
27-27.9	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	..	1.07	1.08	1.07	..	1.05	1.05	1.05	.98	.97
28-28.9	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	..	1.10	1.12	1.10	..	1.10	1.10	1.10	1.02	..
29-29.9	1.21	1.21	1.21	..	1.21	1.21	..	1.21	..	1.13	1.16	1.15	..	1.16	1.16	1.16	1.06	..
30-30.9	1.25	1.25	1.25	..	1.25	1.25	..	1.25	..	1.16	1.20	1.20	..	1.22	1.22	1.22	1.10	..
31-31.9	1.30	1.30	1.30	..	..	1.30	..	..	..	..	..	1.25	..	1.28	1.28	1.28	1.14	..
32-32.9	1.35	1.35	1.35	..	..	1.35	..	..	..	..	..	1.30	..	1.34	1.34	1.34	1.18	..
33-33.9	..	..	..	..	..	1.41	..	..	..	..	..	1.35	..	1.40	1.40	1.40	1.22	..
34-34.9	..	..	..	..	..	1.47	..	..	..	..	..	1.40	..	..	..	1.46	1.26	..
35-35.9	..	..	..	..	..	1.53	..	..	..	..	..	1.45	..	..	..	..	1.30	..
36-36.9	..	..	..	..	..	1.59	..	..	..	..	..	1.50	..	..	..	..	..	..
37-37.9	..	..	..	..	..	1.65	..	..	..	..	..	1.55	..	..	..	..	..	..
38-38.9	..	..	..	..	..	1.71	..	..	..	..	..	1.60	..	..	..	..	..	..
39-39.9	..	..	..	..	..	1.77	..	..	..	..	..	1.65	..	..	..	..	..	..
40-40.9	..	..	..	..	..	1.83	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	..	1.89	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	..	1.95	..	..	..	..	..	..	..	.	..	..	..	..

PETRECO

A typical 3-unit "Petreco" installation, showing switch house, method of piping crude to dehydrators, and piping of clean oil to storage tanks. Capacity, 3600 barrels of clean oil per day.

The use of "PETRECO" Electrical Dehydrators for treating crude oil emulsions insures full recovery of all the oil from the emulsion content, while restoring the entire production to its original gravity.



This booklet tells the story in detail. Send for your copy today.

PETROLEUM RECTIFYING COMPANY of CALIFORNIA

Security Title Insurance Bldg. 530 West 6th Street, Los Angeles, Calif.

Petroleum Bldg. Houston, Texas

	Nov. 6 1928
41 to 41.9 gravity	1.41
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.51
44 and above	1.56

WHEELER COUNTY
(Humble Oil and Refining Company and Magnolia Petroleum Company)

Below 30 gravity	.65
30 to 30.9 gravity	.72
31 to 31.9 gravity	.79
32 to 32.9 gravity	.86
33 to 33.9 gravity	.91
34 to 34.9 gravity	.96
35 to 35.9 gravity	1.01
36 to 36.9 gravity	1.06
37 to 37.9 gravity	1.11
38 to 38.9 gravity	1.16
39 to 39.9 gravity	1.21
40 to 40.9 gravity	1.26
41 to 41.9 gravity	1.31
42 to 42.9 gravity	1.36
43 to 43.9 gravity	1.41
44 and above	1.46

CARSON-HUTCHINSON COUNTIES
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Pipe Line Company)

Below 32 gravity	.69
32 to 32.9 gravity	.76
33 to 33.9 gravity	.81
34 to 34.9 gravity	.86
35 to 35.9 gravity	.91
36 to 36.9 gravity	.96
37 to 37.9 gravity	1.01
38 to 38.9 gravity	1.06
39 to 39.9 gravity	1.11
40 to 40.9 gravity	1.16
41 to 41.9 gravity	1.21
42 to 42.9 gravity	1.26
43 to 43.9 gravity	1.31
44 and above	1.36

WEST TEXAS
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*

Crane-Upton, Crockett, Pecos and Winkler Counties, all grades	.65

*Gulf does not post in Winkler County; Magnolia posts in Crane, Upton and Winkler Counties and that part of Glasscock not included in the Chalk field. The Marland Company posts only in Crane, Upton and Crockett Counties; Southern posts only in Crane, Upton and Winkler Counties.

(Magnolia Petroleum Company)

Mitchell County	$ .80
Howard-Glasscock County (shallow)	.80
Howard-Glasscock County (deep)	.65

Col-Tex Refining Company

Howard and Mitchell Counties	$ .80

WYOMING-MONTANA
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.48
Grass Creek	1.48
Rock Creek	1.33
Lost Soldier	.95
Lance Creek	1.48
Mule Creek	1.10
Notches	.65
Big Muddy	1.33
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.33
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	$1.65
Cat Creek	1.33
Lake Basin	2.20

NEW MEXICO

	Nov. 6 1928
Artesia	1.08
Hogback	1.38

CANADA

Oil Springs	2.07
Petrolia	2.00

NORTH LOUISIANA
(The Texas Company)

24 to 24.9 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

LOUISIANA-ARKANSAS
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley**
(Atlantic Oil Producing Company, Standard of Louisiana, Magnolia Petroleum Company and The Texas Company).

	Nov. 6 1928
27 to 27.9 gravity	.81
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.09
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.21
34 to 34.9 gravity	1.26
35 to 35.9 gravity	1.31
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.46
39 to 39.9 gravity	1.51
40 to 40.9 gravity	1.56
41 to 41.9 gravity	1.61
42 to 42.9 gravity	1.66
43 to 43.9 gravity	1.71
44 gravity and above	1.76

*Shreveport-Eldorado's postings stop at above 40 gravity.

**Below 36 gravity, the posting on Cotton Valley is 75 cents. From 36 to 52 and above the regular gravity schedule is followed.

STEPHENS
(All Companies)

Below 28 gravity	.75
28 to 28.9 gravity	.79
29 to 29.9 gravity	.83
30 to 30.9 gravity	.87
31 to 31.9 gravity	.91
32 gravity and above	.95

SMACKOVER
(All Companies)

Below 24 gravity	.75
24 and above	.90
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.85
Calion	.75

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

American Petroleum Institute Figures (Barrels of 42 gallons)

	Week Ended Oct. 27	Week Ended Oct. 20
AT ATLANTIC COAST PORTS—		
Baltimore	153,000	153,000
Boston	143,000	72,000
New York	733,000	912,000
Philadelphia	163,000	169,000
Others	....	70,000
Total	1,192,000	1,376,000
Daily Average	170,286	196,571
AT GULF COAST PORTS—		
Galveston District	....	....
New Orleans and Baton Rouge	305,000	257,000
Port Arthur and Sabine District	....	60,000
Tampa	....	50,000
Total	305,000	367,000
Daily Average	43,571	52,429
AT ALL UNITED STATES PORTS—		
Total	1,497,000	1,743,000
Daily Average	213,857	249,000
Daily Average four weeks ended	208,571	241,750

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

American Petroleum Institute Figures (Barrels of 42 Gallons)

	Weew Ended Oct. 27	Week Ended Oct. 20
AT ATLANTIC COAST PORTS—		
Baltimore	95,000	216,000
Boston	....	....
New York	190,000	75,000
Philadelphia	....	....
Others	....	....
Total	285,000	291,000
Daily Average	40,714	41,571
AT GULF COAST PORTS:		
Daily Average	....	....
TOTAL—ATLANTIC AND GULF COAST PORTS	285,000	291,000
Daily Average	40,714	41,571
Daily Average four weeks ended	39,429	48,286
Distribution of total California Oil Receipts is as follows:		
Crude	....	....
Gasoline	285,000	291,000
Total	285,000	291,000

THE LAYNE

Wire Wrapped and Mill Grooved Screen

The new Milled Groove of the Layne & Bowler Screen has proven to the complete satisfaction of many hundreds of users that increased production is possible in the same old well.

A much larger inflow area, but the same unusual strength, has been the secret of the increasing popularity of the new type screen.

ASK THE COMPANY THAT HAS USED IT.

Write, phone or wire for any information on this new type screen.

The Layne & Bowler Co.

Houston, Texas

THE LAYNE-NEW YORK CO.
30 Church St., New York

The LAYNE & BOWLER CORP.
Los Angeles, Calif.

VICKERS LIMITED
London, England

Say you saw it in The OIL WEEKLY

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1927	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
July	846,750	107,750	475,800	142,950	56,200	109,900	111,800	86,950	620,700	2,558,800	79,322,300
August	832,900	105,100	483,450	139,350	56,950	104,750	114,600	80,750	621,450	2,539,300	78,717,850
September	797,450	105,200	493,750	142,900	53,450	101,350	110,800	74,500	637,250	2,516,650	75,498,900
October	782,300	105,100	497,900	138,400	51,300	100,450	113,600	73,250	629,000	2,491,300	77,230,000
November	766,900	106,650	501,750	138,100	49,400	97,850	114,900	75,050	623,850	2,474,450	74,233,500
December	720,700	106,150	531,650	138,500	47,200	94,950	111,250	77,150	624,600	2,452,150	76,017,050
1928											
January	675,450	108,300	523,300	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June	594,850	105,200	554,400	135,400	42,350	102,850	109,300	82,400	643,400	2,370,150	71,104,500
July	587,150	102,750	597,250	133,650	42,150	90,700	113,400	80,400	644,700	2,392,150	74,156,600
August	656,350	102,200	604,000	130,200	40,200	87,500	113,300	77,700	634,150	2,445,600	75,534,600
September	724,850	99,750	604,150	129,500	39,050	84,700	112,550	78,850	631,650	2,505,050	75,151,500
October 6	745,000	98,350	611,750	128,350	38,900	84,250	113,000	81,700	622,700	2,524,000	17,668,000
October 13	748,500	98,450	594,500	124,050	39,550	84,700	114,000	81,750	620,000	2,505,500	17,538,500
October 20	743,350	98,300	596,500	130,500	38,650	82,300	114,500	84,500	615,800	2,504,400	17,530,800
October 27	738,050	97,200	598,350	132,650	38,550	83,250	115,000	85,450	635,200	2,523,700	17,665,900
November 3	725,450	96,950	589,900	136,850	38,150	83,300	113,000	82,550	631,000	2,497,150	17,480,050
Increase	.....	.....	.....	4,200	.....	50	.....	.....	.....	.....	.....
Decrease	12,600	250	8,450	.....	400	.....	2,000	2,900	4,200	26,550	185,850

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	Nov. 3	Oct. 27
Carson County	6,350	6,150
Gray County	28,850	28,650
Hutchinson County	30,600	30,800
Wheeler County	800	900
Others	1,600	2,150
Total	68,200	68,650

NORTH TEXAS

Archer County	19,600	19,500
Burkburnett	9,700	9,650
Electra	12,800	12,750
Iowa Park-K-M-A	3,700	3,600
Montague and Cooke Counties	10,250	10,400
Wilbarger	31,950	33,600
Others	600	600
Total	88,600	90,100

WEST CENTRAL TEXAS

Brown County	10,800	10,900
Callahan County	3,550	3,500
Coleman County	4,150	4,100
Eastland-Desdemona	7,100	6,950
Jack County	1,550	1,500
Palo Pinto County	400	400
Shackelford County	10,600	10,700
Stephens County	7,250	7,000
Throckmorton County	800	800
Young County	8,500	8,600
Others	700	700
Total	55,400	55,150

WEST TEXAS

Crane-Upton Counties	54,000	55,200
Crockett County	2,800	2,900
Howard County-Glasscock	31,800	31,700
Jones County	3,700	3,850
Mitchell-Scurry Counties	2,750	2,800
Pecos County	71,170	74,000
Reagan County	17,400	17,700
Winkler County	144,300	146,000
Others	1,400	1,500
Total	329,250	335,650

EAST CENTRAL TEXAS

Boggy Creek	2,000	2,450
Corsicana-Powell	9,700	9,800
Currie	550	550
Mexia	6,550	6,600
Nigger Creek	700	700
Richland	500	500
Wortham	1,600	1,600
Total	21,600	22,200

SOUTHWEST TEXAS

Dale	1,000	1,000
Laredo District	9,000	9,000
Luling	13,400	13,250
Lytton Springs	1,000	1,000
Somerset	700	700
Others	1,750	1,650
Total	26,850	26,600
T'tl Tex. (Outside Gulf Coast)	589,900	598,350

TEXAS GULF COAST

Sugar Land	2,750	.....
Barbers Hill	2,750	2,850
Batson	1,400	1,400
Big Creek	2,100	2,200
Blue Ridge	7,950	7,600
Boling	2,000	1,600
Damon Mound	1,900	1,800
Goose Creek	6,750	6,500
Hull	12,000	12,850
Humble	3,850	3,750
Orange County	3,800	3,700
Pierce Junction	11,400	11,900
Saratoga	1,000	1,000
Sour Lake	3,250	3,200
South Liberty	3,900	3,700
Spindle Top	39,300	38,600
West Columbia	8,050	7,500
Others	1,500	3,000
Total	115,600	113,150
Texas Total	705,500	711,500

OKLAHOMA

North Braman	2,700	2,700
South Braman	1,450	1,450
Blackwell	3,400	3,400
Hubbard	2,400	2,400
Thomas	1,100	1,100
Tonkawa	11,950	11,950
Garber	7,400	7,400
Burbank	26,550	27,000
Osage (outside Burbank)	26,500	26,500
Cushing	20,150	20,150
Yale Jennings	7,850	7,850
Davenport	1,750	1,750
Bristow Slick	20,650	20,700
North Okmulgee	14,500	14,500
Lyons Deaner	4,600	4,600
Cromwell	8,850	8,850
Papoose	4,000	4,000
Wewoka	5,450	5,450
Seminole	43,300	42,600
Bowlegs	50,400	51,350
Searight	10,950	11,650
Little River	120,500	127,300
Earlsboro	76,900	79,400
Duncan District	7,550	7,550
Graham	4,950	5,000
Fox	1,600	1,600
Healdton	13,850	13,750
Hewitt	9,100	9,300
Scholem Alechem	14,100	14,500
Pearson	2,100	2,100
St. Louis	125,100	126,150
Allen	23,350	23,400
Others	50,450	50,650
Total	725,450	738,050

CALIFORNIA

Santa Fe Springs	41,500	38,200
Long Beach	189,000	190,000
Huntington Beach	50,500	51,000
Torrance	16,000	16,000
Dominguez	10,000	10,000
Rosecrans	5,000	5,000
Inglewood	28,000	28,000
Midway-Sunset	74,000	74,000
Ventura Avenue	52,500	54,000
Seal Beach	25,500	24,500
Others	139,000	144,500
Total	631,000	635,200

ARKANSAS

El Dorado	5,200	5,200
Champagnolie	11,950	11,600
Smackover Light	7,250	7,150
Smackover Heavy	54,700	55,050
Stephens	1,050	1,050
Nevada	1,300	1,350
Lisbon	1,750	1,750
Others	100	100
Total	83,300	83,250

KANSAS

Greenwood County	25,500	25,700
Florence-Covert	950	950
Peabody-Ebling	3,250	3,250
Eldorado-Towanda	12,950	13,000
Augusta-Fox Bush	3,250	3,250
Rainbow Bend	1,400	1,400
Russell	4,100	4,300
Churchill	8,550	8,200
Oxford	7,900	8,150
Others	29,100	29,000
Total	96,950	97,200

LOUISIANA

NORTH LOUISIANA

Homer	4,150	4,200
Haynesville	5,800	5,800
Caddo Light	9,200	9,000
Caddo Heavy	2,900	3,050
DeSoto-Red River	4,000	4,000
Elm Grove	550	550
Bellevue	800	850
Cotton Valley Light	600	650
Cotton Valley Heavy	3,450	3,600
Urania	6,150	6,300
Pleasant Hill	500	550
Totals North Louisiana	38,150	38,550

LOUISIANA GULF COAST

Bayou Bouillon	900	700
East Hackberry	3,300	3,400
Edgerly	800	900
Evangeline	950	950
Lockport	3,650	3,800
Sorrento	700	700
Sulphur Dome	3,600	1,950
Sweet Lake	2,300	2,200
Vinton	4,300	4,200
Others	750	700
Total Louisiana Gulf Coast	21,250	19,500
Louisiana Total	59,400	58,050

MOUNTAIN STATES

WYOMING

Salt Creek	36,950	40,200
Grass Creek	2,350	2,250
Elk Basin	950	1,050
Big Muddy	2,650	2,750
Lost Soldier	3,850	4,000
Rock River	2,600	2,500
Lance Creek	350	350
Others	6,100	5,200
Oregon Basin	5,500	5,600
Total	61,300	63,900

MONTANA

Cat Creek	1,550	1,500
Sunburst	8,300	8,300
Others	350	550
Pondera	1,600	2,000
Total	11,800	12,350

COLORADO

Moffats (Craig)	850	1,250
Fort Collins	2,350	2,250
Florence	1,200	1,300
Others	2,550	2,500
Total	6,950	7,300

NEW MEXICO

Artesia	950	950
Hogback	550	500
Rattlesnake	850	300
Others	150	150
Totals	2,500	1,900
Totals Mountain States	82,550	85,450

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	113,000	115,000

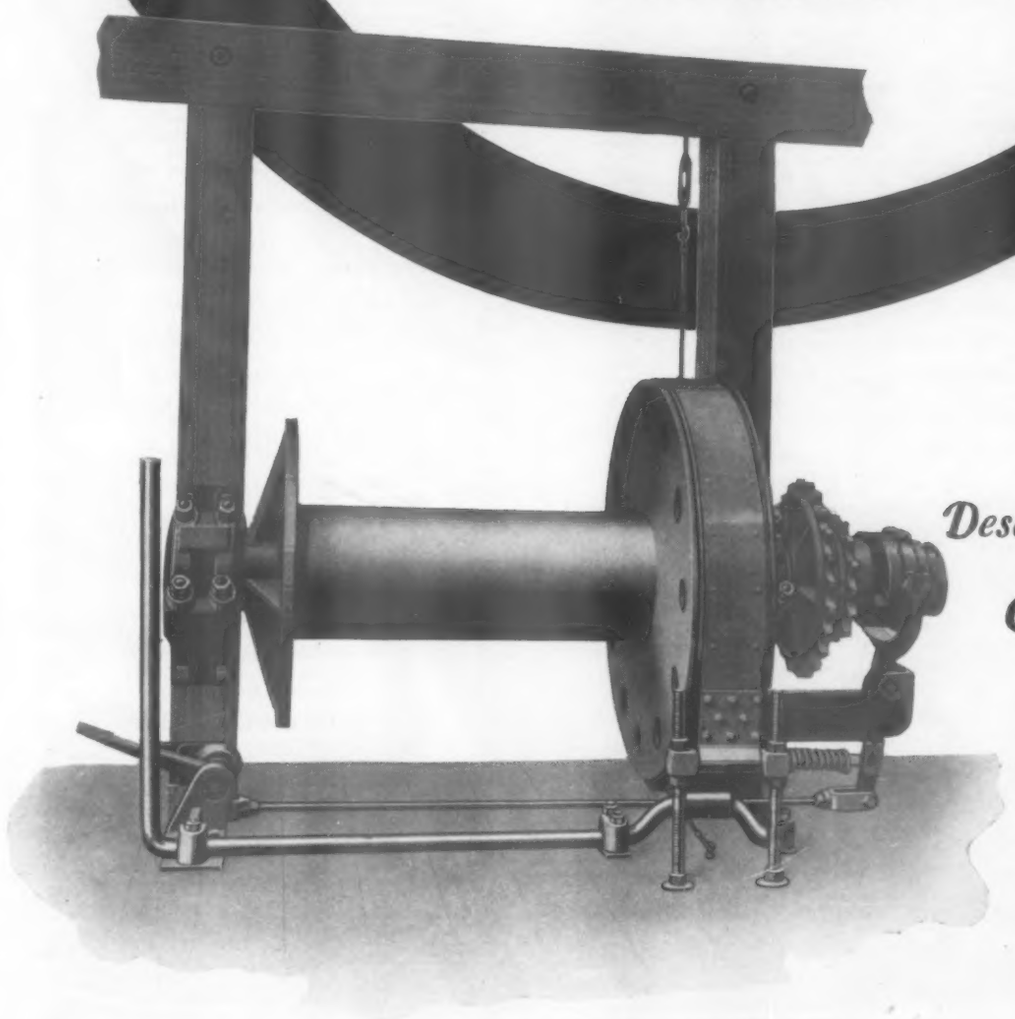
PRODUCTION SUMMARY

East of Rockies	1,783,600	1,803,050
Total U. S.	2,497,150	2,523,700

NATIONAL TUBING HOIST

Type "BJ"

THE NATIONAL SUPPLY COMPANIES



Descriptive Bulletin No. 14N. On Request

Say you saw it in The OIL WEEKLY

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	6	13	2	2	2	2	2	9	762	80
California	17	14	17	13	..	..	..	1	16,650	15,150
Illinois	6	4	3	2	1	1	2	1	195	51
Kansas	16	14	6	5	1	1	9	8	568	880
Kentucky	37	25	25	21	1	1	11	3	962	689
Louisiana	19	13	5	1	2	5	12	7	1,602	25
Michigan	3	..	1	..	2	..	..	..	30	...
New York	..	16	..	14	..	..	..	2	...	33
Ohio	53	43	19	16	18	18	16	9	513	233
Oklahoma	77	73	45	42	8	10	24	21	22,894	22,664
Pennsylvania	40	84	39	76	1	6	..	2	162	325
Texas	121	141	69	71	5	8	47	60	36,115	38,840
West Virginia	17	21	5	4	9	14	3	3	18	20
Total	412	461	236	267	60	66	126	126	80,471	78,990
Increase this week	..	..	..	..	..	..	..	..	1,481	...
Decrease this week	49	..	31	..	6	..	..	..	...	...

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
C. Anderson et al, Eaves 1, swc new sw, 24-1s-3w	135	2675
Magnolia Pet. Co., Ida Bumpass 6, nwc se, 33-1s-3w	*	3930
COTTON COUNTY—		
Cullum & Perkins, Priddy 4, sec ne, 3-2s-10w,	30	2282
CREEK COUNTY—		
Gled Oil Co., Murrel 2, nwc sw sw, 17-19-9	¶1	2485
O. M. Irelan, Smith 2 c nw se, 11-17-10	15	2080
Houston Oil Co. & Silurian Oil Co., Clifford 1, nec nw, 7-19n-7e	525	3149
Haddock et al, Evans 1, nec se sw, 16-17-9	*	3368
Shaffer O. & R. Co. et al, Page 1-A sec sw nw, 34-16-10	*	3099
Riverland Oil Co. et al, Simonpoke 1, sec ne se, 9-16-12	*	2150
GARVIN COUNTY—		
Magnolia Pet. Co., Jones 11, nec se nw, 14-1n-3w	34	1720
GRADY COUNTY—		
Stogner et al, McCaughtry 11, swc ne, 23-5n-8w	¶18	2290
Little Nick Oil Co., Farwell 4, sec se, 26-5n-8w	¶30	2398
Commerce Dev. Co., Parks 3, swc sw, 13-4n-8w	¶25	2360
Carter Oil Co., Erwin Polson 4, nwc se sw, 27-3n-5w	22	1681
Farley et al, A. McMahon 1, c ne nw, 24-4n-8w	*	2575
KAY COUNTY—		
Ingram & Wilson, Booley 1, swc se sw sw, 14-27n-1e	¶1	885
Johnson 2, c n 1 s½ ne, 36-28-1w	¶7	728
KIOWA COUNTY—		
Alexander et al, Fuqua 2, cnl ne ne, 18-6n-16w	*	502
MUSKOGEE COUNTY—		
Grubbs & Young, J. Friday 3, c wl sw nw, 8-15n-15e	¶6	1190
Gleddin Oil Co., A. R. Mathews 1-A sec nw ne	*	1832
OKFUSKEE COUNTY—		
W. L. Umburn, Simmer 4, sec ne ne se, 11-10-11	60	2027
W. L. Umburn, Johnson 1, sec sw se, 2-10-11	30	1651
Henry Oil Co., Sears 2, swc ne, 5-11-11	*	3870
OKMULGEE COUNTY—		
W. B. Pine, Henry 1, owd sec ne ne, 30-12n-13e	20	2143
H. E. Jolly et al, D. Serrell 1, sec sw, 33-15n-14e	8	1670
Misener, Tucker 5, sec sw nw, 11-13n-14e	*	1310
J. L. Selby, Connor 10, c nw nw, 6-14n-15e	*	1650
F. D. Misener, W. Francis 11, nwc sw nw, 11-15n-14e	*	1760
Harsha & Delaney, Unallotted 1, owd swc nw, 35-16-14	*	1923
OSAGE COUNTY—		
Clint Moore Estate & Ohio Osage Co. 3, nwc nw, 16-21-9e	20	255
Phillips Pet. Co. 10, nwc sw se, 17-27-6e	50	2975
Clint Moore Estate & Ohio Osage Co. 15, nwc sw sw, 9-21-9	20	314
Okla. Nat. Gas Corp. 1654, sec ne, se, 28-21-11	*	1916
PONTOTOC COUNTY—		
Ramsey Oil Co., Millner 1, owd sec nw sw, 17-5n-8e	210	2376
Parker 1, owd swc nw se, 17-5n-8e	180	2550
Westheimer & Daube, Wade 5, swc ne, 19-5n-8e	240	2612
O. K. Portland Cement Co., Mathews 2, c nw sw, 24-4n-7e	¶7	1372
Henry & Hunter, Smith 1, swc nw, 31-4n-7e	*	....
POTTAWATOMIE COUNTY—		
Sinclair O. Co., Blandin 6, sec nw sw, 24-7n-4e	500	4273
Blandin 7, nec nw sw, 24-7n-4e	275	4184
Blandin 8, nwc ne sw, 24-7n-4e	590	4163
Blandin 9, sec ne sw, 24-7n-4e	735	4189
Blandin 10, nec se sw, 24-7n-4e	325	4355
Blandin 11, swc se sw, 24-7n-4e	240	4225
Coley 2, nec se se, 24-7n-4e	243	3948
Bruno 1, c nl n½ nec, 26-7n-4e	1630	4256
Indep. O. & G. Co., Youts 8, sec ne se, 19-7n-5e	1550	4150
Sinclair O. & G. Co., Kitch-ee 4, sec nw sw, 19-7n-5e	80	4297
Kitch-ee 5, nec sw sw, 19-7n-5e	235	4180
Kitch-ee 6, nec nw sw, 19-7n-5e	160	4012
T. B. Slick, Houts 2, sec sw, 19-7n-5e	1544	4276
Magnolia Pet. Co., Chas. Youts 1, nec se sw, 20-7n-5e	452	4251
Youts 4, swc nw sw, 20-7n-5e	2038	4213
H. E. Youts 5, sec sw sw, 20-7n-5e	2712	4296
Phillips Pet. Co., Stahl 3, swc nw ne, 30-7n-5e	1107	4371
Indep. O. Co., Sam Lowe 2, nec se sw, 29-7n-5e	*	....
Mahtat-Was 2, nec se, 30-7n-5e	*	....
Mahtat-Was 3, sec ne se, 30-7n-5e.	*	....
Mahtat-Was 4, swc ne se, 30-7n-5e.	..	....
SEMINOLE COUNTY—		
Superior Oil Co. et al, Walker 3, nec ne, 2-9n-5e	325	4433
Carter Oil Co., James 3, swc ne sw, 6-9n-6e	555	4583
Texas Co., James 1, nwc se, 6-9n-6e.	705	4377
Indep. O. Co. & White Eagle, Davis 4, swc se, 2-7n-6e	480	4171
Carter Oil Co., Moore 2, swc ne nw, 11-7n-6e	452	4357
Texas Co., Janey 4, nwc ne sw, 11-7n-6e	345	4541
Indep. Oil Co., R. Davis 3, sec sw sw, 13-7n-6e	1050	4397
Tewee 4, nwc se, 14-7n-6e	759	4420
Reiter & Foster, Bunyard 4, nec nw sw, 14-7n-6e.	560	4280
Carter Oil Co., Cotcha 3, nwc sw ne, 23-7n-6e	290	4416
The Texas Co., Hotulke 3, nec sw nw, 23-7n-6e	555	4377
La. O. & R. Co., Statler 2, swc se sw, 7-5n-8e	200	2734
Sunray Oil Co., Sarney 1, nec nw, 19-5n-8e	625	2708
Phillips Pet. Co., Dixon 1, sec sw, 31-8n-7e	*	4407
Slick, Williams 3, nec se, 15-7n-6e	*	4757
STEPHENS COUNTY—		
Petroleum Producers Corp., B. T. Leonard 1-A, swc ne ne, 6-18-8w	*	2559
Pearce & Brown, Winter 1, nwc se 10-1-8w	*	2513
TULSA COUNTY—		
Ellen O. & G. Co., E. Nave 1-A, nec sw, 25-18-14	*	1341
WAGONER COUNTY—		
H. W. Kiskaddon, T. Howard 2, nec se ne, 8-16n-16e	*	1396
W. R. Rowland, A. S. Sugar 1-A, nw sw, 17-17n-16e	*	1112

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Garden et al, Sluss 2C, sw nw ne, 6-27-6e	128	2750
COWLEY COUNTY—		
White Eagle O. & R. Co., Smith 1, se ne se, 26-34-5e	*	3645
ELK COUNTY—		
Ozark Drlg. Co., Townlot 1, nw se nw, 10-31-10e	10	2023
Pure Oil Co., Webb 2, nwc sw, 13-31-10e	*	1754
Denton et al, McSpeadden 1, ne nw nw, 10-31-10e	*	2321
Superior Oil Corp. & DeVore, McIntier 1, se ne nw, 4-30-9e	*	2419
Jacon Oil Co., Mullendore 2, sw nw sw, 3-30-9e	*	750
GREENWOOD COUNTY—		
Skelly Oil Co., Schwab 7, nw se ne, 30-22-13e	35	1685
Syndicate Oil Co. & Phillips Pet. Co., Edwards 1, nwc ne, 35-23-11e	250	1870
Derby Oil Co. et al, Winzler 1, swc 21-22113e	*	1841
McPHERSON COUNTY—		
Merriman et al, Anderson 1, c sw, 29-18-2w	¶4	2951
RUSSELL COUNTY—		
Gypsy Oil Co., Cook 1, c ne se, 10-13-15w	*	3448
ROOKS COUNTY—		
Empire O. & R. Co., Dodrill 1, ne se nw, 15-8-18w	*	3450
SUMNER COUNTY—		
Shawver et al, Spencer 1, sec ne, 27-34-2e	100	3520
Harris & Haun, Warner 1, c nw ne, 23-34-2e	45	3793
Jarvis et al, Werneke 1, sec sw, 4-34-3w	*	4685

SOUTHWEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
WEBB COUNTY—		
Houston Oil Co., No. D-5, blk 13, Sec. 753	100	2309
No. D-16, blk 12, Sec. 753	100	2342
Rycade Oil Corp., Yeager-Strohman 2, share 5, Las Animas grant, Albercas	¶45	2165
Wm. R. Jewell, Bruni 3, blk 56, Albercas grant	*	2180
ZAPATA COUNTY—		
W. R. Duke, Charco Redondo grant, Martinez B-1	¶20	970
DUVAL COUNTY—		
Schoolfield, O'Byrne & Pearson, Krauter 1, blk 20, Sec. 250	40	2342

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EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
Forest Oil Corp., July, 201 F 8	2	....
July, 203 F 8	2	....
Drake L 14	2	....
Drake mine pressure wells	*	....
Quinlan Bros., Quinlan 9	3	....
M. D. Wright & Co., Wright 1	3	....
C. A. Duke, Duke 16	4	....
L. G. Shenfield, Shepard 9	4	....
H. P. McKalip & Co., Bingham 7	4	....
L. M. Lilly & Co., Middaugh 28	3	....
Wormer & Co., Wormer 7	3	....
L. F. Kinley & Co., Mantz 3	3	....
T. H. Kervin, Kervin 7	4	....
D. Mooney, Mooney 3	3	....
Wormer 7	3	....
McCool & Co., Wright 2	3	....
Forest Oil Co., Baldwin 34	4	....
C. P. Byron Estate, Bingham 577, tract 2	3	....
W. J. Healey, Stimson 3	2	....
Stimson 4	2	....
W. J. Healey, Stimson 5	2	....
T. H. Kennedy, No. 5, tract 3	2	....
No. 13, tract 2	2	....
Hazlewood Oil Co., No. 1, tract 12	2	....
Blair & Duke, Duke 2	3	....
R. O. Landers & Co., Landers 6	3	....
J. A. Walters, Walters 9	3	....
Jack & Co., Jack 3	3	....
M. C. Reidy, Reidy 4	3	....
James George & Co., Bingham 411, tract 35	4	....
Lawrence & Co., Lawrence 1	3	....
Hurd Bros. & Co., Newton 1	3	....
Nichols & Co., Franchot 1	3	....
F. A. Wile & Co., Franchot 1	3	....
Hooker & Co., Hooker 9	3	....
R. S. Pringle, Bingham 464, tract 27	2	....
T. H. Kennedy, Kennedy 7	3	....
GREENE COUNTY—		
B. & N. O&G Co., Hedlee 4	5	....
Olive O. & G. Co., Sicklesmith 18	3	....
B. & C. Nuss, Trustee, Ray 2	50	....
WASHINGTON COUNTY—		
Perry Tombaugh, Phillips 2	¶¼	3345

WEST VIRGINIA

CALHOUN COUNTY—		
Gerwig-Knothe O. & G. Co., Hardman 1	¶1	....
Hope Construction & Ref. Co., Hardman 5	¶½	....
Calhoun Oil & Gas Co., Meadows 1	*	....
Park Bowser, Matthews 11	2	....
M. F. Crowley, Seales 4	¶1½	....
Godfrey L. Cabot, Ferrell 4	¶1½	....
RITCHIE COUNTY—		
Park Bowser, Grim 3	5	....
Bachelor & Co., Pierpoint 3	5	....
Smith & Bickel, Dotson 1	4	....
ROANE COUNTY—		
United Carbon Co., Harold 2	¶2¼	....
Heck Oil Co., Kincade 1	*	....
WIRT COUNTY—		
A. C. Adair, Rathburn 3	2	....
LEWIS COUNTY—		
Moran Bros., Kenney Heirs 1	¶1½	....
LINCOLN COUNTY—		
T. H. Lockwood, White 1	¶½	....
WAYNE COUNTY—		
Public Gas Corp., Caldwell 3	¶½	3070
DODDRIDGE COUNTY—		
W. L. Travis, Marman 1	¶¼	....
WOOD COUNTY—		
Henderson Oil Co., Wharton 32	*	....

KENTUCKY

WAYNE COUNTY—		
J. C. Blair & Co., Gregory 9	10	....
Bell & Black, Cooper 17	*	....
POWELL COUNTY—		
Hillside O. & Dev. Co., Wireman 10	3	....
Adkins & Keenan, Mullins 5	5	....
ALLEN COUNTY—		
Lee Moore & Co., Williams 1	*	485
J. R. Evans & Co., Stovall 1	*	385
FLOYD COUNTY—		
Distill-Martin O. & G. Co., Baldridge 1	¶2	....
WOLFE COUNTY—		
Garrison Bros. & Co., Roberts 14	6	....
JOHNSON-MAGOFFIN COUNTIES—		
S. T. S. Dev. Co., Davis 2	*	....
ESTILL COUNTY—		
Superior Oil Corp., Miller 9	2	....
Miller 10	*	....
Tyree 24	2	....
Wise 15	1	....
West & Co., 20	1	....
Tipton 11	*	....
McEldowney & Co., Tackett 3	1	....
DAVIESS COUNTY—		
Smith, Randolph & Co., Wells 3	160	....
Creek Drilling Co., Tyler 6	100	....
L. S. Clough & Co., Jones 5	70	....
Lowman, Daley & Co., Buston 1	60	776
Young & Daugherty, Feldspausch 1	60	....
Gray & Having, Ward 1	35	....
L. C. Young, Park 2	30	....
Yeiser 3	40	....
Garrison & Goldburg, Purcell 1	10	....
Rowe & Randall, Simmons 1	8	945
OHIO COUNTY—		
James C. Ellis, Weller 35	150	....
Wood Oil Co., Inc., Elmore 35	100	....
White Plains O. & G. Co., Helley 6	50	450
Ohio Oil Co., Patton 2	20	595
C. Claypool & Co., Ralph 6	30	456
Sunnydale O. & G. Co., Mitchell 1	8	409
Creek Drilling Co., Hickey 1	*	620
Turner & Lewis, Edge 1	*	....
Ohio Oil Co., Roach 6	*	595
S. H. Russell, Kelley Heirs 6	*	410
Fuqua 2	*	402

SOUTHEASTERN OHIO

MONROE COUNTY—		
F. O. Parks & Co., Neib 1	10	....
Shay & McMullen, Sutton 1	¶½	....
J. M. Lewis, Sutton & Robinson 1	¶¼	1702
S. Hamilton & Co., Stine 1	*	....
Wittmer O. & G. Co., Bierce 1	*	....
N. D. Stoudt & Co., Reich 3	*	1490
WASHINGTON COUNTY—		
Tuney & Co., Van Fleet 4	10	540
Ohio Fuel Gas Co., Leeper 3	¶½	1152
W. C. Noland & Co., Noland 9	2	....
Rock Oil Co., Oliver 5	*	1315
MORGAN COUNTY—		
Lord, Shaw & Co., Newton 6	¶¼	1604
Bauman & Co., Hilaman 29	¶½	1531
Ohio Fuel Gas Co., Benjamine 1	¶¼	1428

CENTRAL OHIO

LICKING COUNTY—		
Brown & Co., Chapin 8	8	758
Preston Oil Co., Cooperider 1	*	....
Wright 7	8	....
H. C. Farmer, Case 4	..	756
Everette Gas Co., Shipley 2	*	3039
Whitehill Gas Co., Ashcraft 4	15	682
ATHENS COUNTY—		
Smith & Thomas, Curtis 4	5	115
Fox & Mosure, Bean 3	¶½	1271
Bean 4	5	129
Frank Selby, Lovell 2	*	1400
Ohio Fuel Gas Co., Gifford 4	¶¼	1343
PERRY COUNTY—		
Wm. Kline & Co., Sowers 4	119	....
The Kemrow Co., Flowers 2	*	3133
CARROLL COUNTY—		
Miller-Lees Oil & Gas Co., Miskey 12	7	....
Edward Risser, Baker 1	*	....

ABREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

Company, Well and Location	Initial Production Bbls.	Depth
MEIGS COUNTY—		
Oscar O'Connell & Co., Holmes 1	¶¼-3	....
Tyree & Co., Carnahan 4	*	700
MEDINA COUNTY—		
Ohio Fuel Gas Co., Lincoln 3	¶2	....
Hurd 2	¶¼	....
MUSKINGUM COUNTY—		
Wm. Kline & Co., Rehl 1	¶1	3492
Lantz & Meade, Baughman 3	¶¼	727
GALLIA COUNTY—		
Ohio Fuel Gas Co., Smith 1	¶¼	1870
Atha Drilling Co., Lane 1	¶½	....
ASHLAND COUNTY—		
The Kemrow Co., Glass 1	¶½	....
Logan Gas Co., Bowman 1	*	....
SUMMITT COUNTY—		
F. A. Brendall & Co., Wilcox 1	¶4	....
Bosh 2	*	....
KNOX COUNTY—		
Logan Gas Co., Beatty 1	114	3120
COSHOCTON COUNTY—		
Pure Oil Co., Anderson 2	108	3068
GUERNSEY COUNTY—		
Hopewell Oil & Gas Co., Simmons 3	18	3380
HOCKING COUNTY—		
Preston Oil Co., Hardin 4	¶½	2836
STARK COUNTY—		
Cashdollar & Co., Seifert 1	*	3941
TUSCARAWAS COUNTY—		
H. R. P. Miller, Wohlwend 1	*	3327

NORTHWESTERN OHIO

ALLEN COUNTY—		
Ira B. Post & Co., Lenney 8	25	1363
H. F. Kelly & Co., Theet 1	25	1366
W. B. Evenbeck & Co., Keith 3	15	1243
WOOD COUNTY—		
Russell M. Bell & Co., Rocker 3	10	1292
G. W. Huffman & Co., Reitzel 2	6	1326
HARDIN COUNTY—		
Leonard O. & G. Co., Price 1	¶¼	....
SENECA COUNTY—		
W. W. White & Co., Fredericks 1	*	1585

ILLINOIS

WABASH COUNTY—		
G. W. Miller & Co., Price 3	90	1580
J. S. Young & Co., Stillwell 1	85	1442
Highland Oil & Gas Co., Green 1	*	1610
CRAWFORD COUNTY—		
Silurian Oil Co., Mann 2	¶2-20	1492
Edward Kerlin, Southers 1	¶½	....
Dinsomor Oil Co., Mirtland 7	*	....

MICHIGAN

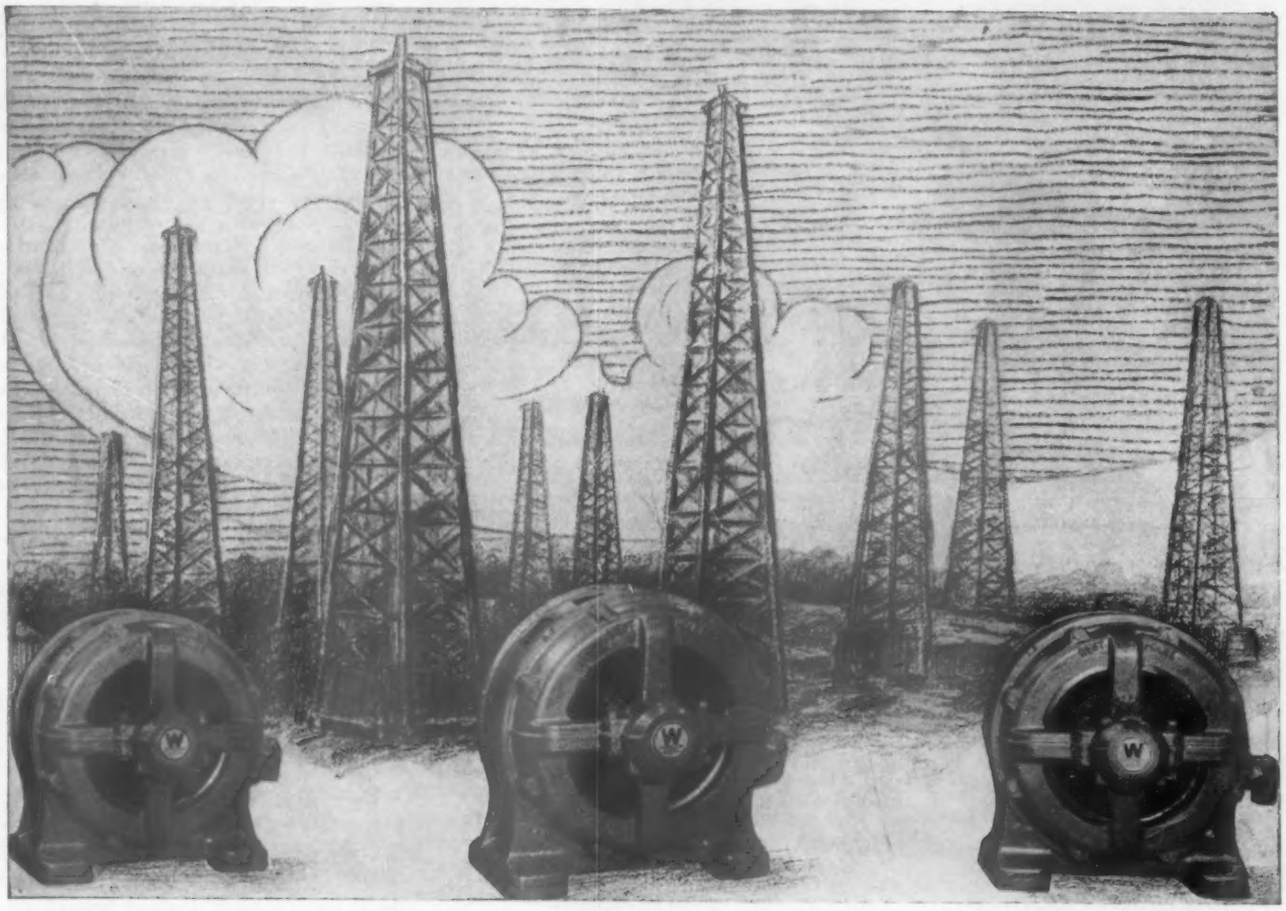
MUSKEGON COUNTY—		
Dixie Oil Co., Dirkes 1	30	1630
Kelley Goldboss, Burns 2	¶12	....
Inland Oil Co., Gebott 1	¶10	2060

CALIFORNIA

ATHENS-ROSECRANS—		
Union Oil Co., Howard Park 18	500	5650
HUNTINGTON BEACH—		
Western Drilling & Prod. Co., 24	100	2180
MIDWAY—		
Republic Pet. Co., 31, 7-32-23	1600	2925
LONG BEACH—		
Thomas Bailes, Miller 1	1650	5510
General Pet. Corp., K. and H. 10	400	6950
Herndon Pet. Corp., No. 9	250	6250
Shell Co., Alamitos 33	400	7645
Babb-Tucker 5	800	6340
Cresson 12	1300	7375
Shell Fee 4	2000	7990
Superior Oil Co., Britton 4	200	7440
Texas Co., Yochem 4	200	7600
Woolner Oil Co., Butler 2	1500	6700
Umpire Petroleum Co., No. 41	200	6858
RICHFIELD—		
George W. Johnson, Davenport 1	300	3990
SANTA FE SPRINGS—		
Texas Co., Matern 2-7	4500	5743
VENTURA—		
Associated Oil Co., V. L. W. 8	750	7500

ARKANSAS

JOHNSON COUNTY—		
Ark. Nat Gas Corp., Bynum 1, 13-10-24	¶8	3126
O. L. Hudson 1, 14-10-24	¶10	2795
UNION COUNTY—		
Lion O. & R. Co., C. B. Nash 4, 6-17-13	732	3032
Magnolia Pet. Co., Carroll 6, 1-17-14	30	2980



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NORTH LOUISIANA

BOSSIER PARISH—
Hamiter et al, Hamiter 1, 10-23-12 .. * 1875
DE SOTO PARISH—
La. Public Utilities Co., Rives 1, 14-12-12 . ¶1 1010
WEBSTER PARISH—
Bruce Richardson, Mayfield 1, 20-23-9 * 2776
UNION PARISH—
Feazel & Smith, Steele 1, 16-20-4e.. ¶12 2155

SOUTH LOUISIANA

EVANGELINE—
Ratcliff, Seiss & McLean, Crusel 1, wo . 130 1680
VINTON—
Marrs McLean, G. & N. G. 1, wo .. 230 1800
Vinton Pet. Co., Rescue 8 ..... 10 2840
Seiss Oil Syndicate, Green 6, wo 32 2500
EAST HACKBERRY—
Yount-Lee Oil Co., State Land 18 .. * 3800

TEXAS

TEXAS GULF COAST

BLUE RIDGE—
Gulf, Bassett Blakely B-15 ..... 450 3750
L. W. Luscher 12, wo 425 3625
South Texas Prod. Co., Blakely-Lee 1, wo . 800 4030
Navarro Oil Co., Robinson A-1, wo * 4000
GOOSE CREEK—
Humble, Jones-Stateland 3, wo 25 2530
LIBERTY—
Sun Oil Co., Mitchell 10 .....1500 880
ORANGE—
Rycade Oil Corp., State C-2, wo.. 40 4030
Sun Oil Co., Belile 1, wo 7 3650
SOUR LAKE—
Lake View Oil Co., Hardin Co. 57.. 10 990
SPINDLE TOP—
L. A. Painter, Rush-Ewing & Ring 2 * 3390

EAST TEXAS

HARRISON COUNTY—
Nick Barbare, Furrh 5, Jas. Short sur . ¶2 2381
PANOLA COUNTY—
Natural Gas & Prod. Co., Roquemore 7, B. C. Jordan sur ..... ¶5 2445

SOUTHWEST TEXAS

DUVAL COUNTY—
J. W. O'Byrne et al, Krautex 1, Govt. Wells pool . 35 2345
Sun Oil Co., Davis 1, Govt. Wells pool . 250 2345
WEBB COUNTY—
Rycade Oil Corp., Yeager-Strohman 2, Albercas field . 25 2170
Wm. R. Jewell, Bruni 3 . * 2180
Houston Oil Co., Benavides D-5, Cole field 75 2340
Benavides D-16, Cole field 100 2347
ZAPATA COUNTY—
O. W. Killam, Cuellar 4 ..... 75 1472

TEXAS PANHANDLE

CARSON COUNTY—
Empire Gas & Fuel Co., Crutchfield 1 ¶14 2685
GRAY COUNTY—
Landreth Prod. Corp., Langham 1... 135 2786
Prairie O. & G. Co., W. Harrah 2.. 60 3250
The Shamrock Co., W. P. Dial 1 ... * 3350
Skelly Oil Co., Bruce Bull 1..... ¶8-85 2800
The Texas Co., J. E. Williams 3.... 35 2821
HUTCHINSON COUNTY—
Phillips Pet. Co., Johnson-Barnum 4 200 2931

CENTRAL WEST TEXAS

BROWN COUNTY—
Cranfill & Reynolds, Eubanks 16.... 75 1210
Humble O. & R. Co., Hickman 25... 10 1275
Milham Corp., Rosser 5 ..... 30 1322
Pandem Oil Corp. and Gilman, Mullins 1 . * 1270
Phillips Pet. Co., Hickman 16 .... 100 1277
CALLAHAN COUNTY—
Moutray Oil Co., Hatchett 1 ..... * 375
The Texas Co., Hatchett 4 ..... 15 350
COLEMAN COUNTY—
Duncan & McCrady, Rice 2 ..... 5 1197
National Ref. Co., Farrell 1 ..... * 2500
Texas-American Synd., Crawford 1.. * 2005
Texas Producing Co., Gates 1 ..... * 2352
EASTLAND COUNTY—
Chestnut & Smith Corp., Brashear 2 * 3620
Goodwin & Lewis, Bourland 1 ..... * 3625
Hoffman & Page, Foster 2 ..... 25 1290
Downtain 1 . * 1570
Stalker Oil Co., Holcomb 1 ..... ¶4 1593
T. P. Coal & Oil Co., Allen 1-B.... * 807

PALO PINTO COUNTY—
T. G. Shaw et al, Gilbert 1 ..... * 4140
SHACKELFORD COUNTY—
James et al, Moberley 11 ..... 7 995
Roeser-Pendleton and Marland Prod. Co., Cook 82-A, (Sec. 60)..... 30 1175
Cook 20-A, (Sec. 61)..... 50 1355
Cook 22-A, (Sec. 61)..... 55 1308
Cook 8-A, (Sec. 62)..... 100 1365
Cook 43-C, (Sec. 60)..... 30 1222
Tannehill Oil Co., Moberley 11..... * 1150
Wentz Oil Corp., Matthews 1-A ... * 1169
STEPHENS COUNTY—
Leiser & Sneboldt, Guest ..1.....1½ 2307
Pace & Ward, Sloan 2..... ¶2-15 3358

NORTH TEXAS

ARCHER COUNTY—
L. T. Burns and Humble O. & R. Co., Longley 1 . * 1150
W. B. Corlett-White and American Ref. Properties, Cernosek 2 ..... 35 1444
P. E. Gwynn et al, Eckols 1 ..... * 1367
Panhandle Ref. Co. et al, Prideaux 7-C . 3 660
F. Payne et al, Parrish 5 ..... 60 1596
Rathke Oil Co., Andrews 7 ..... * 1000
The Texas Co., Richardson 20..... 80 1310
Underwood Drl. Co. et al, Andrews 2 950
Western Oil Corp., Prideaux 5 ..... 20 682
Prideaux 6 . 25 648
Prideaux 7 ..... 40 642
Prideaux 8 . 25 646
Prideaux 9 ..... 10 655
Prideaux 10 ..... 15 642
Prideaux 11 . 20 636
Lee Wilson et al, Kunkel 1..... * 1190
CLAY COUNTY—
Eastern Pet. Corp., Barry 7 ..... 10 775
COOKE COUNTY—
SunflowerOil Co., Dennis 1 ..... * 1506
ELECTRA—
Bridwell & Heydrick, Burnett 2 .... 50 1931
Gulf Prod. Co., S. B. Burnett 42-A.. * 1830
Wayne H. Hammon et al, McCarty 11 . 80 1365
Mrs. R. A. Laning et al, McCarty 5 60 1348
Ryan Consolidated Pet. Corp., Nance 99 . 225 1365
JACK COUNTY—
Holman Heirs et al, Fee 4 ..... * 2040
A. Ratblatt et al, Maxey 1 ..... * 560
K-M-A & IOWA PARK—
Holbrook & Wood, K. & K. 23 .... 50 1197
United Producers Co., W. L. Hodge 2 . 125 1488
WILBARGER COUNTY—
Baker et al, Waggoner 7 ..... 170 1897
Consolidated Oil Co., Waggoner 1-G * 2504
Harry Hines et al, Ancell 1 ..... * 2402
Panhandle Ref. Co., Waggoner 1..... * 2505
Phillips Pet. Co., Waggoner-Dorothey 4 ..... 125 1883
The Texas Co., Waggoner 1-K ..... * 2242
Waggoner Ref. Co., Waggoner 11-H 200 2440
YOUNG COUNTY—
Allday Oil Corp. and Carter, Johnson 7-A . * 640
Magnolia Pet. Co., C. W. Johnson 4 * 861
Paull Oil Co., Allen 4 ..... 315 2120
Thompson 2 ..... 130 2085
Petroleum Prod. Co., Weichman 1.. * 1254
Riggs et al, Sweet 4 ..... * 600
McKinley 19 ..... * 582
Wise & Jackson, Calvin 1 ..... 8 634

WEST TEXAS

HOWARD COUNTY—
Fred Heyer & Yates, Clay 1 .... 70 1828
Magnolia Pet. Co., Roberts 11 ..... 300 2660
JONES COUNTY—
Robert Oil Corp. et al, Smith 2..... 640 2499
Sinclair O. & G. Co., Bickley 1 .... 350 2478
RUNNELS COUNTY—
Vacuum Oil Co. et al, McMillan 3 350 2513
PECOS COUNTY—
Gulf Prod. Co., I. G. Yates 20..... * 1324
I. G. Yates 21 ..... * 1375
Mid-Kansas O. & G. Co., Yates 6-D, 775 1130
WINKLER COUNTY—
Atlantic Oil Prod. Co., Hendrick 6-G 3000 2742
Pure Oil Co., Grisham-Hunter 7-C..13,000 2648
Republic Prod. Co., Hendrick 6-B..1000 2552
Roxana and Texas Co., Cowden 4-A 9000 2895
Southern Crude and Dixie Oil Co., Ida Hendrick 3-A-T-67 ..... 300 2961
Ida Hendrick 3-E-T-67 ..... 575 2950

W. R. and W. E. Ramsey Incorporate

Oklahoma City.—W. R. and W. E. Ramsey of Oklahoma City, who have for the past few years ranked among the state's leading individual producing operators, have merged into the corporation class with the recent formation of Ramsey Petroleum Corporation, capitalized at $5,000,000 under the laws of Delaware. Announcement of the new corporation was made by W. R. Ramsey, president, November 1. W. E. Ramsey is vice-president; R. M. Franks, vice-president in charge of the land department, Williard L. Miller, vice-president and chief geologist, F. L.Billups secretary and treasurer, and Mary Fuller assistant secretary-treasurer.

Capital stock of Ramsey Petroleum Corporation includes $2,500,000 in common stock at $100 par and $2,500,000 preferred stock of the same par value. One million dollars in common stock has been issued to W. R. Ramsey and W. E. Ramsey, while the remaining stock is reported as remaining in the treasury and not for sale on the open market.

The new corporation's producing properties include 5,000 barrels oil production from 37 wells and nearly 200,000,000 cubic feet of gas production daily from nine wells. It has 14 rigs running. While the corporation's activity is confined mainly to the Allen pool of Pontotoc County, Oklahoma, and surrounding areas, it owns leases in Texas, Louisiana, New Mexico, Colorado, Alabama and California.

Mid-Continent Oil Scouts To Meet at Ponca City

Tulsa.—The 1929 convention of the Mid-Continent Oil Scouts and Land Men's Association will be held in Ponca City April 26 and 27, Rex L. Dawson, chairman of the board of the association, has announced. The primary importance of this next annual meeting hinges around the probability of merging this association with the National Oil Scouts, the Texas organization. Committees were appointed at a recent scouts' meeting here to handle the details of merging the two associations and an investigation of necessary steps in re-drafting the constitution and by-laws is being made by members.

Bakersfield, California.—The joint test of the Lincoln Drilling Company and the Richfield Oil Company on Section 21-26-22, in the Semitropic district, is drilling ahead, after an unsuccessful production test at 3825 feet. The well is located several miles from the Buttonwillow gas field but in a general area which has yielded gas and oil showings for several years.

There's no "*trash-trap*" ★ ★ ★ recess left open in the ★ ★ ★ W-K-M Drilling Valve

Instead, there's a fluid passage as smooth and tight as the inside of a joint of drill stem

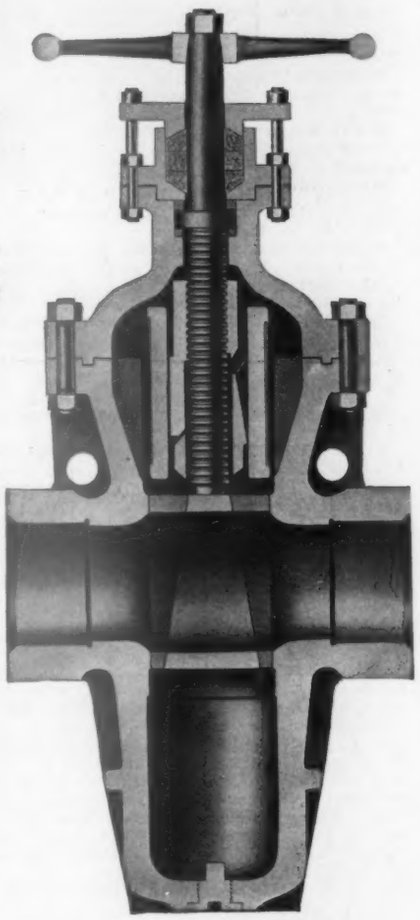
Maybe you've fought a stubborn drilling gate battle or two yourself. You know what trouble and misery can be dealt a crew by a valve whose seats are cut out, and which can't be closed tightly. Or, by a valve whose cavity has filled with foreign matter, so the gates won't seat. Or, by a valve in which a fragment of rubber slush pump piston or valve has lodged in the hood, blocking the gates so they can't be moved.

Things like this have happened to every seasoned driller—and that includes most of you superintendents, in the days not so far back. But, drilling gate worries are over; drilling gate weaknesses have been solved.

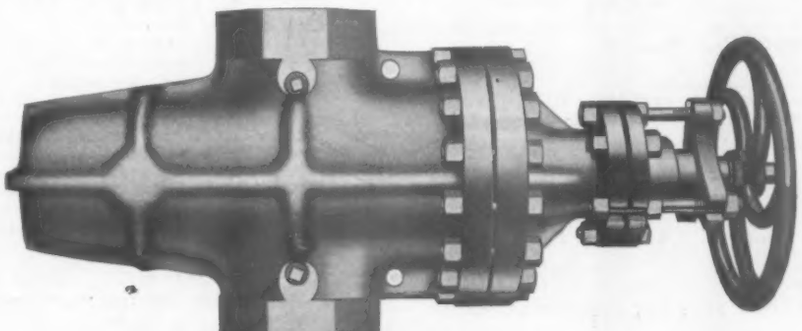
The illustration at the left shows the solution. A smooth, round, sealed flow-way through which anything that enters must keep on going. There is no place for foreign matter to deposit. No place for it to lodge. Nothing exposed for sharp sand to cut away. Nothing that tools passing through can damage. Nothing exposed, when the valve is open, but the non-corrosive walls of the sealed flow-way.

A close inspection of the merits of the W-K-M LAW Drilling Valve will convince you it is the one you have been looking for. We will be glad to make the inspection easy for you. Either write us for illustrated descriptive matter, or permit us to have one of our field men demonstrate a cut-away model in your office. There is no obligation involved in accepting either of these offers.

Use the handy coupon below—or write, wire or 'phone.



Push a hook through either of the large pickup holes on a W-K-M LAW Valve, raise it, and one man with one hand can balance it easily. A very convenient feature, and one that appeals to the crew.



There is much argument about valves that clean their own seats. Rooters for both the double gate type and the single-wedge type sing the praise of their favorites. But here is a valve that does not have to have its seats cleaned—they are kept clean from the very start by the three wedges which form the sealed flow-way. If they needed cleaning, however, the sharp edges of the 'conduit' would clean them as it broke out when the valve was being closed.

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WEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
LOVING COUNTY—		
Hadlock Oil Co., Russell 2	30	4395
PECOS COUNTY—		
A. T. Fletcher et al, Powers-Winfield 1	*	1933
F. P. Zoch-Moncrief et al, Cordova Union 1	*	1368

ANDREWS COUNTY—Deep Rock Oil Co.'s Hostetter 1, dr 100 ft. Mid-Continent Pet. Corp.'s M. M. Fisher 1, lcn.

BORDEN COUNTY—Condor Oil Co.'s Hall 1, fsh 895 ft. E. L. Doheny et al's Koonsman 1, elev 2427 ft, top salt 900 ft, top lime 2430 ft, sd 3210 ft.

BREWSTER COUNTY—Brewster Oil Co.'s Fee 1, lcn. Cowden et al's Jackson-Harmon 1-A, sd 1500 ft. Forest Oil Corp.'s Skinner 1, sd 1150 ft. Van McPhail et al's McIntyre 1, sd 1765 ft. Reese & White's Kimball 1, sd 2010 ft. Clayton Williams et al's Poncey 1, sd 355 ft.

COKE COUNTY—Lipan Oil Co.'s Rawlings 1, sd 2840 ft. Louisiana Oil Ref. Corp.'s Powers 1, dr 2215 ft. Mid-Kansas O. & G. Co.'s Lackey 1, dr 885 ft.

CONCHO COUNTY — Exploration Co.'s Hartgrove 2, machine. K. Kimberlin et al's Maloy 1, sd 1460 ft.

CRANE COUNTY — C. C. Duffey et al's Cowden 3, top salt 675 ft, dr 1405 ft. Evans et al's State Bank Fee 1, sd 3651 ft. Gulf Prod. Co.'s Waddell 5, elev 2740 ft, top salt 1215 ft, top lime 3100 ft, dr 3165 ft.

CROCKETT COUNTY — Barbara Oil Co.'s H. B. Cox 1, bad hole 895 ft. V. T. Bolin et al's Coates 1, dd, co 2110 ft. T. W. Callahan et al's Todd 1, elev 2465 ft, top salt 905 ft, sd 2015 ft. Hal Compton & Co.'s University 1, dr by junk 2225 ft. W. W. Donnelly-W. A. Moncrief and J. D. Young's J. S. Todd 1, machine; Todd 2 and 3, lcns. Fuhrman Pet. Corp.'s Padgett 1, elev 2305 ft, top salt 670 ft, top lime 1440 ft, show water 1897 ft and pb and shot 250 qts at 1780-1835 ft. Texas-Canadian Oil Co.'s University 1, run cas 555 ft. F. P. Zoch & W. A. Moncrief et al's Tippett 1, lcn. J. D. Wheeler et al's State Fee 1, sd 285 ft.

CULBERSON COUNTY — Deep Rock Oil Co. & Grisham-Hunter's Seay 2, machine. J. M. Hickey et al's Finley 1, sd 1565 ft. Scott & Dittman's Miller 1, sd 1765 ft. West Texas Oil & Exploration Co. (was Hillyer's) McGregor 1, dr 210 ft.

JEFF DAVIS COUNTY—Sam F. Means et al's J. Z. Means 1, sd 3205 ft.

DAWSON COUNTY—Magnolia Pet. Co.'s W. R. Jeter 1, top salt 1640 ft, dr 1735 ft.

EDWARDS COUNTY—Gail Oil Co.'s Jernigan 1, sd 350 ft. McMan O. & G. Co.'s Schreiner 1, dr 3425 ft.

EL PASO COUNTY—C. E. Sillix et al's Malone 1, sd 1010 ft.

FISHER COUNTY—Hal Cochran & Bickerstaff's McWhirter 1, sd 1330 ft. Cranfill-Reynolds & Sun Oil Co.'s E. G. Young 1, elev 1801¼ ft, dr 3070 ft; J. A. Young 2, elev 1806 ft, ur 2920 ft; Sharp 1, dr 910 ft. Hucony Gas Co.'s Marberry 1, dr 1930 ft. R. W. Rainey & Bill Little's Marberry 1, elev 1929 ft, top lime 2995 ft, sd hfw 3507 ft. Roeser-Pendleton & Landreth's Decker 1-B, dr 2675 ft.

GAINES COUNTY—Pure Oil Co.'s A. A. Williamson 1, rotary rig.

GARA COUNTY—Emerald Oil Co.'s Boren 3, pb for shot, td 4801 ft.

GLASSCOCK COUNTY—Eastland Oil Co. & White Eagle O. & R. Co.'s Cox 1, top salt 1225 ft, top lime 2602 ft, dr 3225 ft. World Oil Co.'s McDowell 1-B, elev 2325 ft, dr 3005 ft.

HOWARD COUNTY—Worth B. Andrews et al's Neal 1, elev 2731 ft, dr 2240 ft. W. W. Donnelly et al's Clay 1, co after shot, td 3135 ft. Green O. & R. Co.'s Furrh 1, set cas 503 ft. L. C. Harrison et al's Dodge 1, elev 2321 ft, top lime 1830 ft, fsh 2585 ft. Henshaw Oil Corp. et al's Settles 2-A, spudding; Settles 1-B, elev 2680 ft, top lime 2085 ft, dr 2725 ft; Settles 1-C, dr 1450 ft; Settles 2-C, dr 755 ft.

ABREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

Group One Oil Corp.'s (Texon) Quinn 1, dr 1050 ft. Group One & Marland Prod. Co.'s Settles 6-A, dr 160 ft; Eason 1, rig. Louisiana Oil Ref. Corp.'s Kloh-Rumsey 1, top gray lime 2174 ft, set cas 2360 ft; Settles 1, dr 1630 ft; Settles 2, rig. Taylor-Link Oil Co.'s Kloh-Rumsey 1, co after shot 400 qts. at 2260-2357 ft, td 2389 ft. Phillips Pet. Co.'s Thomas 1, dr 190 ft.

HUDSPETH COUNTY — The California Co.'s University 1, dr 175 ft. Western States Oil Co.'s Gardner-Mosely 1, sd 3125 ft; S. W. Moore 1, sr 2740 ft.

IRION COUNTY—Central Oil Co.'s Horney 1, sd 350 ft. Fuhrman Pet. Corp.'s J. D. Suggs 1, 2, and 3, lcns. Kimbrough et al's Nutt 1, sd 1400 ft. Kingwood Oil Co. (was W. West et al's) Suggs 1, elev 2334 ft, showing oil and gas, dr 3375 ft. Mertzon Oil Co.'s Roach 1, dr 2060 ft. Signal Oil Co.'s Suggs 1, elev 2415 ft, top salt 705 ft, dr with hfw 1915 ft. Sun Oil Co.'s Williams 1, elev 2332 ft, dr 1675 ft. Webb et al's Nutt 1, sd 2003 ft.

JONES COUNTY — Atkinson & Sandefer's Hudspeth 1, ur 2250 ft. E. P. Campbell et al's Berry 1, dr 2525 ft. Cosden & Co. & Herbert Oil Co.'s Bickley 1, rig; Bickley 5, dr 2280 ft. Cowboy Evans et al's King 1, sd 2015 ft. Cranfill-Reynold's-Dilworth's Bickley 1, dr 1600 ft. Eastland Oil Co. & White Eagle O. & R. Co.'s Derrick 1, dr 2860 ft. Independent O. & G. Co.'s Smith 1, testing pay 2510-17 ft. McMan O. & G. Co.'s Bickley 1, dr 2210 ft; Bickley 2, rig. McNeeley et al's R. Bland 1, rig. Mook-Texas Oil Co. et al's McCright 1, sd 2570 ft. Phillips Pet. Co.'s Mason 4, ur 6-inch cas 2969 ft; Windham 1, ur 2265 ft; Tessie-Walling 6, est. 200 bbls oil at 2499-2509 ft. Milt Richardson et al's Martin 1, sd 725 ft. Robert Oil Corp. et al's Smith 2, swab 640 bbls oil 2491-99 ft; Smith 3, dr 2255 ft. Roeser-Pendleton & Landreth's Grayson 3, rig; Grayson 1-B, testing oil pay 2555-60 ft. Sinclair O. & G. Co.'s Bickley 1, swab 310 bbls oil, 41 deg. grav., 2472-77½ ft; Bickley 2, dr 1840 ft; Bickley 3, lcn. Snowden & McSweeney's Bickley 2, ur 2270 ft. Texas Co. & Cosden & Co.'s Camp 1, elev 1883 ft, dr 1525 ft; L. Carter 2, elev 1867 ft, set cas on oil pay 2482-83 ft; Carter 3, lcn. Woods & Williams' Parr 1, dr 875 ft.

KENT COUNTY—Cosden & Co.'s Bilby 1, dr 3555 ft. Phillips Pet. Co.'s Sandell 1, dr 4175 ft. Pursley Ranch Dev. Co.'s Fee 1, lcn.

KING COUNTY—Humble's Pitchfork 1, dr 4625 ft. The Texas Co.'s Johnson 1, dr 4045 ft.

LOVING COUNTY—Lockhart & Co.'s R. L. Allen 2, top salt 722 ft, dr 1075 ft; Fee-Lepp 1, sd 4190 ft; Wheat-Ramsey 1, top salt 720 ft, dr 3830 ft.

MENARD COUNTY — J. C. Barnett & Drake's Callahan-Rasmussen 1, sd 1857 ft. Panhandle Ref. Co. et al's Eckhardt 1, sd 3018 ft.

MIDLAND COUNTY—C. P. Shelton et al's Kloh 1, elev 2783 ft, top salt 1810 ft, dr 3910 ft. O. H. Shoup et al's Parks 1, elev 2871 ft, top salt 1740 ft, sd 4004 ft.

MITCHELL COUNTY—E. P. Campbell et al's Pond 1, dr 700 ft. Hucony Gas Co.'s Weichsel 1, elev 2139 ft, top salt 550 ft, top lime 1342 ft, sd 1349 ft. Teas & Wheeler's Radford 1, dr 930 ft.

NOLAN COUNTY—Herbert Oil Co.'s Pepper 1, elev 2242 ft, sd 3303 ft.

PECOS COUNTY—Alexander-Lyles & Eastland Oil Co.'s Sellman-White 1, elev 2672 ft, top salt 814 ft, top lime 1602 ft, sd making gas with spray oil at 1611-26 ft. Atlantic Oil Prod. Co.'s Sellman-White 1, spudded and sd. Benedum-Trees et al's Corder 1-A, top lime 1840 ft, sd 2075 ft. M. Z. Dibble et al's Bonebrake 1, elev 2555 ft, sd 1605 ft. J. W. Grant et al's Turney 1, elev 2592 ft, sd 3850 ft. McCarty Oil Co.'s E. W. Bennett 1, rig. Mauch & Krogen's Holmes 1, elev 2325 ft, top salt 535 ft, sd 1138 ft. Pecos Valley Oil Co.'s Fee 1, set cas 1015 ft. Rio Pecos Oil Co.'s Yates 1, dr 480 ft. Roxana & Kirby's University 1, sd 4002 ft. Schumaker et al's Williams 1 spudded and sd. Southern Crude Oil Purchasing Co.'s Scarbauer 1, elev 2680 ft, co 2964 ft. Talbot & Dittman's Unsicker 1, spudded and sd. Transcontinental Oil Co.'s University 1, elev 2552 ft, top lime 1035 ft, set cas 4128 ft. World Oil Co.'s Kloh 1, elev 2810 ft, sd 3105 ft.

PRESIDIO COUNTY—Eastland Oil Co. et al's Smith 1, lcn. Brite Prod. Co.'s Brite 1, sd 2500 ft. Empire-Delmar — Phillips Pet. Co.'s Tootle 1, fsh 680 ft.

REAGAN COUNTY — Empire Gas & Fuel Co.'s Sawyer 1-A, top salt 910 ft, dr 1275 ft. Skelly Oil Co. & Utah Southern's University 3, set casing 825 ft. Texon Oil & Land Co.'s University 1-B, (World's deepest test), dr black lime 8427 ft.

REEVES COUNTY—E. W. Brooks-Thompson et al's Eddins 1, elev 2719 ft, top salt 1622 ft, top gray lime 3216 ft, fsh 5658 ft. D. P. Davis et al's A. A. Kinney 1, spudded and sd. The Exploration Co.'s Kinney 1, elev 2847 ft, sd 2900 ft. Dr. Kitsos et al's Kloh-Rumsey 1, dr 220 ft.

RUNNELS COUNTY—Agnew & Sons et al's Russell 1, elev 1727 ft, top lime 3975 ft, trace oil and gas 3975-90 ft, sd with hfw 4025-26 ft. Gibson-Johnson et al's Rainwater 1, sd hfw 2872 ft. Union Oil Co.'s Allen 1, co 200 ft.

SCHLEICHER COUNTY — Ft. McKavett Oil Co.'s Tisdale 1, dk.

SCURRY COUNTY—Landreth Prod. Corp.'s Hillmer 1, elev 2314 ft, top salt 870 ft, dr 2675 ft. J. B. Mims et al's Koonsman 1, spudded

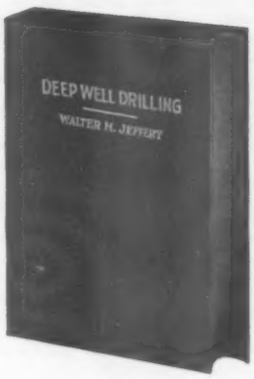
Slick Makes Location in Cleveland County

Tulsa.—T. B. Slick, Inc., following a deal with Phillips Petroleum Company to drill on the properties of the latter in Oklahoma and Cleveland counties, south of Indian Territory Illuminating Oil Company's gas discovery, has made location for a test in the C NE NE Section 8-10-2w, Cleveland County, about four miles south of Oklahoma City 1, the gas discovery six miles south of Oklahoma City, which was drilling at 6120 feet in shale November 2. It is located in the C SE SE Section 24-11-3w, Oklahoma County.

Los Angeles.—Disregarding the possibility of a huge overproduction in the Los Angeles basin, wildcats are being started in widely separated areas by the leading oil companies. The Texas Company has completed a rig for its Garden Grove test, Section 35-4-10, in an area which has not been drilled. Richfield Oil Company has definitely located a well at Maywood and only a short distance from the Los Angeles city limits. Several wildcats have been shut down, giving the total number of operations in the Los Angeles a net loss.

Second Revised Edition . . . .

Deep Well Drilling



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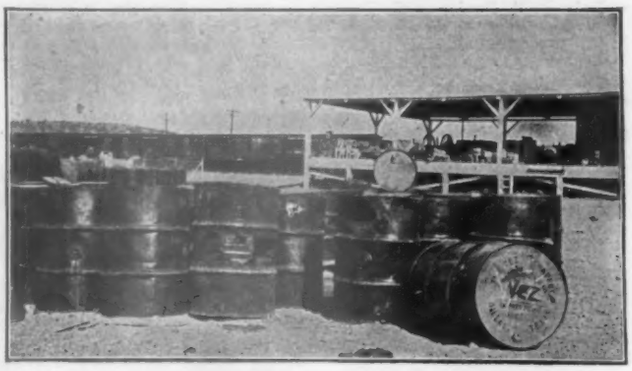

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and sd. R. B. Pender et al's Davis 1, dr 385 ft.

STERLING COUNTY—F. & G. Oil Co.'s Foster 1, dr 1055 ft.

STONEWALL COUNTY — Sun Oil Co.'s Rayner 1, elev 1818 ft, top lime 1500 ft, dr 2950 ft.

SUTTON COUNTY — Phillips Pet. Co.'s Cusenbary 1, dr 125 ft; Holman 1, dr 5775 ft.

TAYLOR COUNTY — Grisham - Hunter Corp.'s Stevens 1, fsh 1890 ft. Hurley Oil Co.'s Payne 1, cavey hole 685 ft. Mid-Kansas O. & G. Co.'s J. H. Parramore 1, rig.

TERRELL COUNTY—Big Bend Oil Corp.'s Bassett 1, spudded and sd. Champlin Ref. Co.'s Carter 1, elev 2884 ft, fsh 3552 ft. Mrs. J. B. McPhee et al's Sam Belt 1, dk. Milham Corp.'s Bassett 1, elev 2270 ft, sd 4255 ft. Keck-Pecos Oil Trust's Hamilton 1, sd 1749 ft.

TERRY COUNTY—Superior O. & G. Co.'s Brownfield 1, elev 3205 ft, sd 4435 ft.

UPTON COUNTY—Keck Investment Co.'s McClintic 1, top salt 1100 ft, dr 1750 ft.

VAL VERDE COUNTY—Dyer Bros. et al's W. E. Wilson 1, sd 1220 ft. Producers Oil Co. et al's Everett 1, lcn. Val Vert Oil Corp.'s Bassett 1-A, sd for casing 1250 ft.

WARD COUNTY — Denver Prod. & Ref. Co.'s Cherokee 1, elev 2597 ft, salt 2755 to 3080 ft, dr 4545 ft. E. B. Lovelace et al's Redman 1, spudded and sd. Prairie O. & G. Co.'s Sealy 1, elev 2666 ft, top salt 1073 ft, making five million ft gas 2526-75 ft, dr 2880 ft. Rector Oil Co. et al's Johnson 1, elev 2438 ft, top salt 745 ft, top lime 2010 ft, fsh 2085 ft. J. F. Shipley et al's Hayzlett 1, elev 2503 ft, top salt 727 ft, top lime 2380 ft, flowing several heads oil at 2460-80 ft. Talbot et al's C. C. Dorr 1, machine.

WINKLER COUNTY—Amerada Pet. Corp.'s Daugherty 1, top lime 2646 ft, dr 2710 ft; Daugherty 2, dr 270 ft; Daugherty 3, rig. Atlantic & Kessler-Logan's Daugherty 2, cem cas 2627 ft. Barnsdall Oil Co.'s Morton 1, dr 1450 ft; Morton 2, rig. Cranfill & Reynolds' Hendrick 1-F, Sec. 16) top salt 1985 ft, dr anhydrite 2560 ft. Empire Gas & Fuel Co.'s Daugherty 2, 3 and 1-B, rigs. Flandell Oil Co.'s Carter 1, set casing 400 ft. Gulf Prod. Co.'s O'Brien 2, dr 1770 ft; O'Brien 3, rig. Magnolia Pet. Co.'s Scarborough 1, top salt 1122 ft, dr 1385 ft. Marland Prod. Co.'s Morton 1, rig. Prairie O. & G. Co.'s Leck-Daugherty 1 and 2, dks; Morton 1, rig. Roxana & Danciger O. & R. Co.'s Daugherty 1 and 2, dks. Simms Oil Co. & Southwest Oil Prod. Co.'s Sealy 1, rig. Southern Crude & Westbrook's E. G. Hutchings 3-T-90, (Sec. 47), elev 2839 ft, top lime 2325 ft, flowing 300 bbls oil daily, dr pay 2898-3045 ft. Wentz Oil Corp.'s Morton 1, rig.

SOUTH LOUISIANA

Company, Well and Location	Completions	Initial Production Bbls.	Depth
CALCASIEU PARISH—			
Union Sulphur Co., Fee 730, Sulphur dome		1200	5700
CAMERON PARISH—			
Pure Oil Co., Yount-Lee 2, Sweet Lake		*	5100
Roxana Pet. Corp., Watkins 4, Black Bayou dome		*	2495
EAST BATON ROUGE PARISH—			
Capital Oil Co., Tucker 1,		*	2845
IBERIA PARISH—			
Gulf Ref. Co. of La., State Z-6, Loreauville		*	1375
IBERVILLE PARISH—			
Roxana Pet. Corp., Wilbert 2, White Castle		*	4218
PLAQUEMINE PARISH—			
Gusher Bill Oil & G. Co., Park Plantation 1		*	2670
TANGIPAHOA PARISH—			
Amite Drlg. Co., Weinberger 2		*	2660
VERMILION PARISH—			
Cardinal Oil Co., Vallee 1		*	lcn.
Kaplan Pet. Co., Dubois 1		*	2430

ACADIA PARISH—E. F. Simms' Clement 1, Jennings, trying to pull strainer, td 3872 ft; Clement 2, Jennings, tested salt water at 3300 ft, now standing; Jennings Oil Co. 1, Jennings, dr 3380 ft hard lime; Jennings Oil Co. 1, Jennings, dr 2135 ft gbo; Cockrell 1, Jennings, set 4½-in cas at 4300 ft. Gulf's Houssiere-Latrielle 1, Egan dome, dr 5410 ft shale.

ASCENSION PARISH—Gulf's United Lands Co. 10, Sorrento, hit cap rock at 1685 ft, tested sulphur water, now standing; No. 11, lcn. Triumph Oil Corp.'s Lacey et al 2, 1¼ mi se Sorrento, ru. Burnside Oil Co.'s Roberts 1, dr 600 ft sand and gravel. Baton Rouge Det. Co.'s Liotta 1, sd 1000 ft.

CALCASIEU PARISH—Union Sulphur Co.'s Fee 729, Sulphur, drk; Fee 730, Sulphur, completed for 1200 bbls at 5700 ft; Fee 731, Sulphur, dr 4350 ft gbo and lime; Fee 732, Sulphur, sand showing oil at 3380 ft td; Fee 734, Sulphur, dr 3007 ft gbo and lime; Fee 735, Sulphur, dr 2970 ft lime and shale; Fee 736, Sulphur, drk; Fee 737, Sulphur, set cas at 1720 ft, now dr at 1825 ft. Lehay et al's Jones 2, dr 2600 ft gbo. J. W. Watson et al's La. Land Co. 1, Sulphur, dr 4125 ft gbo.

CAMERON PARISH—Pure's Yount-Lee 2, Sweet Lake, abn at 5100 ft. Yount-Lee 6, Sweet Lake, dr 5660 ft sand. La. Land & Explo. Co.'s Calcasieu Lake B-3, Kelso Bayou dome, dr 3630 ft sandy shale. Roxana's Watkins 3, Black Bayou dome, dr 1395 ft cap rock; Watkins 4, Black Bayou dome, abn at 2495 ft.

EAST BATON ROUGE PARISH—Capital Oil Co.'s Tucker 1, abn at 2845 ft.

IBERIA PARISH—La. Land & Explo. Co.'s Avery Island 2, dr 5050 ft shale; Vermilion Bay A-3, Vermilion Bay dome, ru; Bernard 1, New Iberia field, temp abn. Gulf's State Z-6, Loreauville, abn at 1375 ft, top cap rock at 1370 ft; State Z-7, Loreauville, lcn; Kling 2, Loreauville, dr 1935 ft sand and shale.

IBERVILLE PARISH—Roxana's Wilbert 2, White Castle, abn at 4218 ft in cap rock. Standard of La.'s Wilbert 1, Bayou Blue, dr 3785 ft sand; Schwing 1, Bayou Blue, ru. Union Sulphur Co.'s Schwing 3, Bayou des Glaise, dr 1100 ft.

LA FOURCHE PARISH—Gulf's Stark et al 7, Thibodaux, dr 1382 ft lime and gypsum.

PLAQUEMINE PARISH—Gusher Bill O. & G. Co.'s Park Plantation 1, abn at 2670 ft.

ST. MARTIN PARISH—Rycade Oil Corp.'s Atchafalaya Fee 4, Bayou Gouillon, dr 1050 ft; Bayou Bouillon 4, dr 23335 ft shale and lime; Bayou Bouillon 5, dr 1030 ft shale; Atchafalaya Fee 3, Bayou Bouillon, dr 3325 ft sandy shale and lime; Atchafalaya Fee 5, Bayou Bouillon, lcn. Bowie O. & G. Co.'s Begnaud 4, Anse La Butte, td 3920 ft. Yount-Lee Oil Co.'s La. Pet. Co. 3, dr 1712 ft sand and shale. Ohio Oil Co.'s Martin et al 3, Hager dome, dr 3800 ft sandy shale.

ST. MARY PARISH—J. Dannenbaum et al's Le Blue 1, Charenton, dr 2610 ft.

ST. TAMMANY PARISH—Pearl Oil Co.'s Fritsche 1, Slidell, dr 1460 ft lime rock.

TANGIPAHOA PARISH—Amite Drlg. Co.'s Weinberger 2, abn at 2660 ft. Kentwood Pet. Co.'s Kent Realty Co. 1, 1520 ft. Tanli Oil Co.'s Weinberger 2, lcn.

TERREBONNE PARISH—Sou. Gas Co.'s Peoples Sugar Co. 1, dr 1990 ft sand.

VERMILION PARISH—Cardinal Oil Co.'s Vallee 1, abn location. Kaplan Pet. Co.'s Du Bois 1, abn at 2430 ft.

WEST FELICIANA PARISH—Robertson & Long's Raccourci 1, td 200 ft.

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TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
AUSTIN COUNTY—		
L. H. Weadock, Ward 1	*	2260
BRAZORIA COUNTY—		
Roxana Pet. Corp., Poole A-2, Allen Dome	*	5960
Moody Corp., Jamison 1, near Angleton	*	4745
CHAMBERS COUNTY—		
Pure Oil Co., Lost Lake 1, Lost Lake	*	3635
LIBERTY COUNTY—		
Sun Oil Co., Kyle 1, Moss Bluff	*	2988

AUSTIN COUNTY—Humble's A. Crawunder C-1, Raccoon Bend, dr 751 ft in shale and lime; Beal 1, Raccoon Bend, td 1182 ft, waiting on cement to set; Bracey B-1, Raccoon Bend, td 1225 ft, waiting on cement to set; Walton 2, Raccoon Bend, dr 204 ft sand rock; Crawunder B-1, Raccoon Bend, dr 2425 ft in shale and lime; Urban 2, Raccoon Bend, dr 2091 ft sandy shale, trace of oil; Hardy 1, Raccoon Bend, dr 190 ft shale and lime. L. H. Weadcock's Ward 1, abandoned at 2260 ft. Gulf's Jackson 1, San Felipe, dr 3190 ft shale.

BRAZORIA COUNTY—Roxana's Poole A-2, Allen dome, abn at 5960 ft; Allen 5, Allen

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dome, dr 3300 ft lime; Reese 3, Allen dome, dr 1507 ft sand. Moody Corp.'s Jamison 1, Angleton, abn at 4745 ft. Myers et al's Davidson 1, Clemens dome, spudded. Empire O. & G. Co.'s Brock 1, Stratton Ridge, drk.

CHAMBERS COUNTY—Pure's Lost River 2, Lost Lake, dr 2300 ft gbo and lime; Lost Lake 1, Lost Lake dome, abn in anhydrite at 3625 ft.

COLORADO COUNTY—Rich Oil Corp.'s Brun 1, 3 mi ne Columbus, dr 915 ft gbo. Alexander & Smith's Kinkler 1, near Cat Springs, dr 2417 ft shale.

FORT BEND COUNTY—Sun Oil Co.'s E. C. Farmer 4, Boling, ru. Sun Oil Co.'s E. C. Farmer 5, Boling, dr 3005 ft sand showing oil. Gulf's Trone 9, Long Point, dr 4085 ft shale; Wolf 11, Long Point, dr 600 ft cap rock; Moore 17, Moore's Field, dr 3885 ft shale: E. C. Farmer 2, Boling, dr 2945 ft gbo. Scott & Peek's Armstrong 1, Boling, washing to bottom. Humble's Dew 1, Sugarland, dr 1734 ft hard sand; Sugarland Industries 2, Sugarland, moving in rig; Dethridge 1, Sugarland, fsh 3647 ft; Nelson 1, Sugarland, dr 1338 ft rock. J. H. Diehl's Armstrong 1, 2 mi e Boling, sd 500 ft. South Texas Exploration Co.'s Hartfield 1, Needville, dr 1800 ft gbo.

GALVESTON COUNTY—Long et al's Irvin & Bishop 1, 2 mi s Dickinson, sd 2675 ft. Republic Prod. Co.'s Lobit 1, 1 mi nw Dickinson, dr 1835 ft, had slight show of gas in a sand at 1055 ft.

GOLIAD COUNTY—J. E. Alexander's Campbell 1, 1 mi n Goliad, sd 825 ft. McCarson et al's Broyles 1, Goliad townsite, sd 90 ft.

HARDIN COUNTY—Chappel Hill Oil Co.'s Hale 1, 5 mi nw Sour Lake, sd 1810 ft. Geudry Drlg. Co.'s Guedry 1, 3 mi s Batson, drk.

HARRIS COUNTY—Torsen et al's Stewart 1, 4 mi sw Genoa, sd 691 ft. Hunt et al's Lobit 1, 4 mi n Goose Creek, sd 2145 ft. Minnetex 1, Mykawa, dr 4017 ft shale; Simms-Smith 74, Goose Creek, dr 4771 ft shale. Paxton et al's Brubacker 1, 1 mi ne Clodine, drk. Cedar Bayou Oil Co.'s Johnson 1, 8 mi n Goose Creek, dr 3970 ft hard shale. J. A. Shine et al's Kitzman 1, 2 mi n Cypress, sd 2780 ft. Brain et al's Lentze 1, 4 mi s Tom Ball, sd 1120 ft.

JACKSON COUNTY—The Texas Co.'s Moore 1, Edna, dr 2660 ft water sand. Wright Bros.' Drushell 8, Edna, preparing to test at 3200 ft; Classen 2, Edna, td 3200 ft. Douglas & Lawrence's Lawrence 1, Edna, sd 3020 ft.

JEFFERSON COUNTY—Deep Test Oil Corp.'s Faith-McFaddin 1, 6000 ft east of Spindle Top, sd 2825 ft. So. Spindle Top O. & Dev. Co.'s Young 1, 1 mi w Nederland, sd 3425 ft. Oswald Dome Synd's Oswald 3, 2 mi se Cheek, dr 3475 ft shale. Gaddy Oil Co.'s Johns 1, 1 mi nw Beaumont, dr 1760 ft gbo. Beaumont Oil Co.'s Tyrrell 1, 2 mi w Brooks, drk. Westbury Synd's West 1, 1 mi ne Westbury, dr 532 ft gbo. Gulf's Burrell et al 2, Fannett, dr 3645 ft gbo.

LIBERTY COUNTY—Barlow et al's Minchcliff 1, 2½ mi ne Cleveland sd 2215 ft. Kouri et al's Campbell 1, 6 mi s Cleveland, sd 2000 ft. Big Dome Interests' Finley 2, 3 mi nw Hardin, drk; Finley 1, 3 mi nw Hardin, dr 4335 ft gbo. The Texas Co.'s Davis 1, Davis Hill, dr 3582 ft hard sand. Humble's Sterling 3, Moss Bluff, dr 2722 ft hard sand and rock; Welder 9, S. Dayton, dr 3254 ft gbo. Sun Oil Co.'s Kyle 1, Moss Bluff, abn at 2988 ft; Koveleika 1, N. Dayton, lcn.

MATAGORDA COUNTY—Rycade's Hudson-Humble 3, Markham, dr 4165 ft shale. Dr. P. S. Griffith et al's Culver 1, e Citrus Grove, sd 3215 ft; Baer 1, 1½ mi n Gulf Hill, sd 1900 ft.

ORANGE COUNTY—Veteran Oil Co.'s Reed 1, 2 mi se Orange field dr 1630 ft gbo.

VICTORIA COUNTY—Houston Oil Co.'s McFadden 2, 11 mi ne Victoria, lcn.

WASHINGTON COUNTY—Lynne Oil Co.'s Heise 10, sd 1810 ft. Sun Oil Co.'s G. F. Grote 2, Clay Creek Dome, oil sand at 1040-1110 ft; Marcus 1, Clay Creek, set surface cas at 143 ft; Einman 1, Clay Creek, ru; Schirmer 2, Clay Creek, lcn.

SOUTHWEST TEXAS

Completions

NUECES COUNTY—
May et al, Gallagher 1, 12 mi w Corpus . . . . . * 3010

SAN PATRICIO COUNTY—
Saxet Oil Co., Katz-State 1, in Nueces Bay . . . . . * 3000
C. I. Albertson, Boscamp 1, n Sinton * 1490

CALDWELL COUNTY—For activity in Bruner field, see story elsewhere in this issue.

DUVAL COUNTY—National Oil Co.'s Ball 2, lcn.

HIDALGO COUNTY—Queen City O. & G. Co.'s Amer. Land & Irrig. Co. 2, 3 mi n Mercedes, sd 700 ft.

JIM WELLS COUNTY—Cushing Oil Co.'s Perez 2, 3 mi n Alice, sd 2200 ft.

KINNEY COUNTY—Stephens et al's Clamp 1, sd 1800 ft.

MAVERICK COUNTY—Rycade's Chittam 2, Eagle Pass, dr 7450 ft lime; Sullivan 3, Eagle Pass, dr 3890 ft sandy lime Ryan Consolidated's India Land Co. 1, 24 mi se Eagle Pass, td 4325 ft, prep to abn.

NUECES COUNTY—May et al's Gallagher 1, 12 mi w Corpus, abn 3010 ft. Aqua Dulce O. & G. Co.'s Sponberg 1, Aqua Dulce, dr 400 ft shale. Alexander & Smith's Eleff 1, Aqua Dulce, ru. Houston Oil Co.'s Talbert 1, Aqua Dulce, dr 1524 ft gbo. Maddox-Horn-Davis' Ragland 1, Aqua Dulce, set surface casing. Sigmund et al's Allan 1, testing at 2717-25 ft. Rosenblum & Grimm's Alban 1, Aqua Dulce, set 10-inch cas at 400 ft.

SAN PATRICIO COUNTY—Saxet Gas Co.'s Katz 1, in Nueces Bay, abn at 3000 ft. LaPrelle et al's White Point 1, dr 2875 ft shale. C. I. Albertson et al's Boscamp 1, n Sinton, abn at 1490 ft. Leach et al's Collins 1, near Mathis, dr 1125 ft. Pickett et al's Whitworth 1, White Point, sd 3250 ft.

VALVERDE COUNTY—Thraves et al's Wilson 1, sd 1125 ft. Valvert Oil Co.'s Bassett A-1, dr 1200 ft.

ZAPATA COUNTY—O. W. Killam's Cuellar 3, Completed for 75 bbls oil at 1472 ft.

MOUNTAIN STATES

NEW MEXICO

CHAVES — Snowden & McSweeney's Merchant 1, ne 27-15s-23e, dr 3400 ft. R. E. Neal et al's Russell 1, 21-14s-25e, undrr at 1100 ft. Warman et al's 1, sw 23-13s-24e, stand, 215 ft.

DE BACA—Matador Oil Co.'s Sttae 1, sw 6-4n-20e, stand. 514 ft. McAdoo Pet. Corp.'s McAdoo 1, ne 16-1s-27e, ready to resume, td 4190 ft. Transcontinental Oil Co.'s McWhorter 1, nw 6-35-22e, mvg in.

GUADALUPE—Navajo Oil Co.'s Goard 1, 10-3n-17e, rig burned down, td 2565 ft.

LEA—Midwest Ref. Co.'s Farnsworth 19, 12-26-37w, dr 3775 ft. Marland's Eaves 1, 19-26-37, fsh 3000 ft; Sholes 1, 19-25s-37e, fsh tools at 3034 ft; Lynn 1, 26-23-36, dr 3100 ft; King 1, ne 26-25s-32e, dr 3990 ft; Brooks 1, sw 8-20s-33e, dr 3015 ft; Danciger 1, 7-23-36e, dr 3195 ft; Reed 1, 22-20s-36e, ready to spud; Meyers 1, 26-20s-37e, dr 900 ft; Waren 1, 29-20s-36e, rigging; Lockhard 1, 31-21s-36e, dr 885 ft; Slattery 1, 7-22s-34e, dr 1215 ft. Gypsy Oil Co.'s State 1, 34-21s-36e, fsh tools 3241 ft. Exploration Co.'s Record 1, 26-19s-35e, td 4556 ft. Morton et al's State 1, ne 32-11s-38, wtg cas 415 ft. Texas Prod. Co.'s Sheppard 1, ne 6-26s-37e, fsh 2900 ft. Texas' Cagle 1, se 9-26s-36e, rig burned 2850 ft. Texas' Moberly 1, se 17-26s-37e, dr 2600 ft. Bordages et al's Hughes 1, 27-19-18w, contr. compl. to 4010 ft. Curtis Drlg. Co.'s Nixon 1, 22-18s-34e, wait pipe, td 1150 ft. C. E. Reynolds Drlg. Co.'s Anderson 1, 29-13s-37e, dr 4970 ft. Cranfill & Reynolds State 1, se 23-26s-36e, dr 1641 ft. Skelly Oil Co.'s Joiner 1, se 26-25s-36e, dr 3100 ft. Rector Oil Co.'s Maechtel 1, sw 5-26s-33e, lcn. Maljamar Oil & Gas Corp.'s Pearsall 2 30-17s-32e, dr 725 ft. Empire Gas & Fuel Co.'s State 1A, nw 12-21s-34e, rig up.

ROOSEVELT—J. T. Keegan et al's Pepper 1, 6-1s-36e, mvg in.

SAN JUAN—Continental Oil Co.'s Munoz 17, 2-29-19, sdtr tools, td 6338 ft. Dorothy Oil Co., 29-30-9, dr 160 ft. Huerfano Oil Co.'s Wiltbank 1, 25-29-11, stndg 800 ft. San Juan Pete Co.'s 1, 9-29-13w, sd 2950 ft. Kirtland Drlg Co.'s Hunt 1, 10-29-15, td 450 ft. Kutz Canon O. & G. Co.'s Day 1, 29-28-11, dr 330 ft. Midwest Ref. Co.'s State 1, se 36-22n-14w, dr 2000 ft. Blackrock Oil Co.'s 1, sw 11-25n-13w, dr 1275 ft. Iowa Oil Synd.'s Viles 2, 28-29-11, nudrr, td 673 ft. Angel Peaks Oil Co.'s Nutz Canon 1, 11-28n-11w, dr 815 ft. R. R. Burke et al's Deneen 1, 18-21-13, dr 805 ft. Fidelity Oil Co.'s Abrams 2, nw 23-29-11, small gas well at 810 ft. Hall et al's 1, 31-22n-13w, shut down at 507 ft.

SAN MIGUEL—E. Adams et al's Deason 1, 14-15n-16e, sd 1235 ft. H. E. Hoover Co.'s Sanjuijuela 1, se 18-17n-17e, stand, 2000 ft. Benedict et al's Benedict-Wilson 1, ne 25-17n-16e, dr 261 ft.

SOCORRO—Arnold et al's No. 2, ne 13-6s-1w, dr 1200 ft.

TORRANCE—Bluhall O. & G. Co., 20-6n-10e, dr 1430 ft. Hall et al's Pinos Wells 1, sw 25-3n-13e, stndg. 400 ft. Sinnock et al's Kutchin 1, 13-7n-7e, prep. to spud.

VALENCIA—Acme Oil Co.'s New Mexico-Arizona Land Co.'s 1, undrr to 3595 ft. Rio Puerco Oil Co.'s No. 2 New Mexico-Arizona Land Co., nw 13-6n-2w, waiting pipe at 3145 ft.

COLORADO

ARCHULETA—Juanita Oil Co.'s Harvey 1, sw 4-32n-3w, dr 631 ft.

BENT—Marland Oil Co.'s Pipe Springs 1, se 27-29s-49w, dr 3865 ft.

JACKSON—Producers & Refiners' State 1, ne 2-6n-81w, cem at 1830 ft.

LAS ANIMAS — Reiter-Foster and Phillips Pete, 23-29n-56, sd 2575 ft. Alavier Pete Co., Branson 1, ne 3-35s-58w, ready to spud. Parker Club-Kinney Coastal's Fee 1, 4-28s-68w, dr 1350 ft.

LA PLATA—Childers Drlg & Prod. Co.'s Dry Mesa 1, 29-32n-14w, refinancing at 820 ft. Royal P. & R. Co.'s Red Mesa 1, 27-33n-12w, dr 300 ft.

LINCOLN—Kelly Oil Co.'s State 1, ne 36-14s-57w, sd 1415 ft.

MESA—Peerless Oil Co.'s Hoel 1, ne 23-8s-104, prep. to deepen from 2058 ft.

MORGAN—Badger Creek O. & D. Co.'s Kent 1, sw 2-2n-57w, fsh 805 ft.

MONTROSE—Uncompahgre O. & G. Co., nw 27-50n-10, dr 835 ft.

MOFFAT—Ohio Oil Co.'s State 1, 16-12-100, dr 2555 ft. Alliance Oil Co.'s Milliken 1, 14-4n-92w, plug back and shut down. McCormick et al's Sales 1, se 28-4n-92w, straight. hole, td 2500 ft.

RIO BLANCO—White Eagle O. & R. Co., se 9-2s-96w, dr 600 ft.

ROUTT—Great Western Oil Co.'s State 1, 17-60n-56w, stand 2475 ft.

YUMA—Etnyre Synd., 7-2s-43, sd 900 ft.

WELD—Platte Valley Pete Corp.'s Patterson 1, sw 24-6n-61w, dr 4125 ft.

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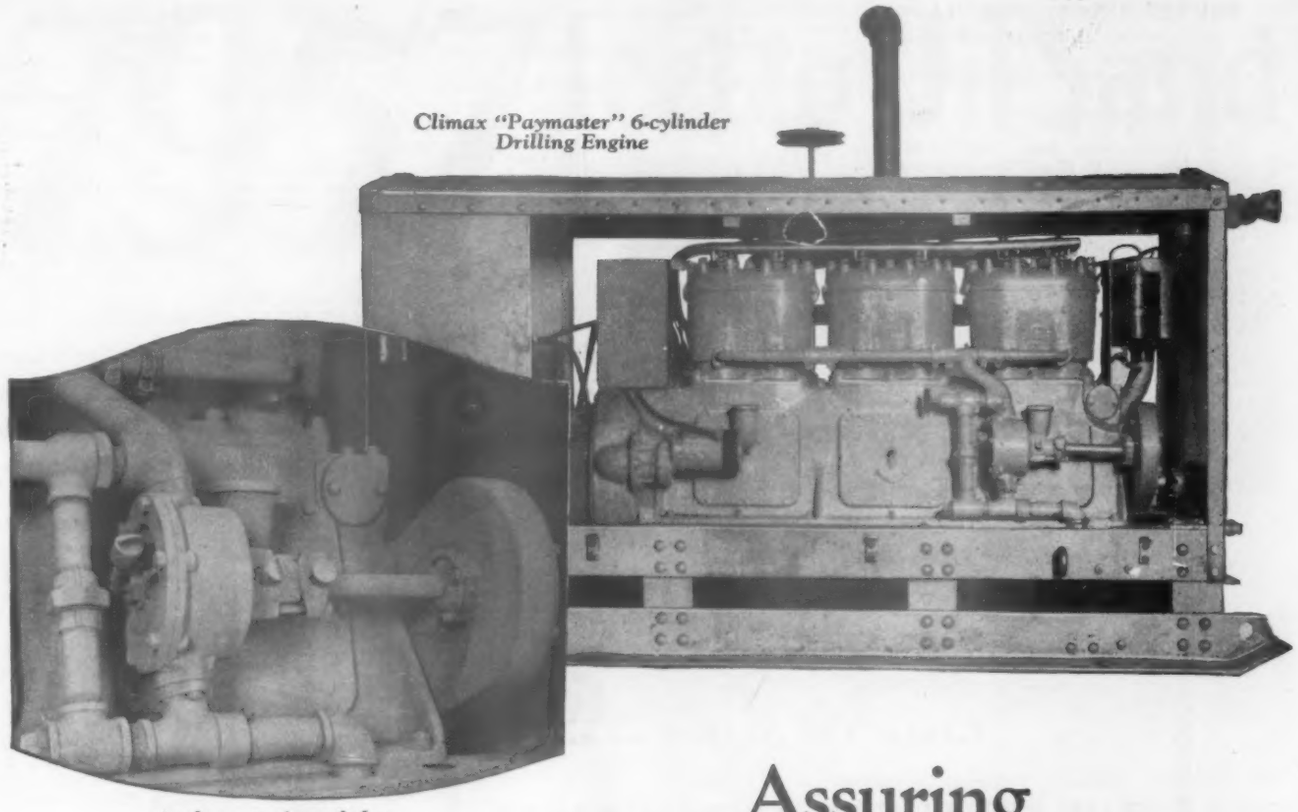

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SOUTHERN CALIFORNIA

BELLEFLOWER — World Pet. Corp.'s Blythe 1, sd 1915 ft.

CALABASAS—Easton & Smith's Morrison 1, sd 2955 ft.

CHATSWORTH—Russell Pet. Co.'s Joughin 1, will deepen from 560 ft.

COSTA MESA—Mesa Pet. Corp.'s B-G 1, 11-inch cas cmt 2500 ft, td 3250 ft; well tested wet of shutoff test.

DAVIDSON CITY—California Well Drilling Co.'s 1, 11-4-13, making production test, td 7660 ft; 4¾-inch cas landed at 7555 ft.

DOWNEY—Associated's Taylor 1, dr hard sand 4600 ft.

FULLERTON—Shell's Stern 1-1, dr hard sand and shell 6066 ft.

GARDEN GROVE—Texas Co.'s Crawford 1, 35-4-10, new lcn, material on ground.

HUNTINGTON BEACH—Western Drilling and Producing Co.'s 1, dr 300 ft.

INGLEWOOD—Ring Pet. Corp.'s Simons 1, sd 4350 ft. California-Eastern Oil Co.'s Community 1, rigging up.

LYNWOOD—Security Pet. Corp.'s Community 1, sd 5335 ft.

MAYWOOD — Richfield's Maywood 1, new lcn.

MONTEREY PARK — Monterey Pet. Co.'s Jepson 1, dr shale 2850 ft.

NEWHALL — California-Eastern Oil Co.'s Hasley 1, 5-4-17, 20-in cas cmt 290 ft.

PUENTE HILLS—Anchor Pet. Corp.'s Hudson 1, plugged to 3700 ft. Richfield's Didier 1, fsh for dr pipe 1690 ft.

SAN FERNANDO — Shell's Mission 2, dr hard sand 4880 ft.

RIVERSIDE COUNTY—L. R. Clark's Banning 1, dr sand 1866 ft. Hall Pet. Corp.'s Watt 1, sr 855 ft. Hemet Pet. Co.'s Ward 1, dr shale 3033 ft. Spindletop Oil Synd.'s Salton 1, sr 3275 ft, td 3460 ft.

SAN BERNARDINO COUNTY — Western Pacific Oil Co.'s 3, fsh 3088 ft.

SAN DIEGO COUNTY—Davenport Oil & Gas Co.'s San Marcos 1, dr sand 860 ft. S. S. Truner's Baler 1, 6¼-inch cas cmt 1215 ft, td 1530 ft.

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The Southern Pacific Lines are an integral part of Texas and Louisiana and upon request will gladly furnish you a concise survey of general locations and transportation facilities of any city in these states.

Manufacturers throughout the country are fast realizing that the Southwest is a territory within itself—and can best be served by establishing a plant or wholesale headquarters "on the ground."

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SOUTHERN PACIFIC LINES

Address Inquiries to
J. C. MANGHAM
Industrial Commissioner

Southern Pacific Lines
HOUSTON, TEXAS

NORTHERN CALIFORNIA

KERN COUNTY

BAKERSFIELD—Pacific Eastern Production Co.'s KCL-4a, 6-30-28, dr hard sand 5418 ft.

BUTTONWILLOW — Milham Exploration Co.'s Wisnom 1, 16-28-23, sd 3050 ft.

COMANCHE POINT — W. W. Stabler's Tejon 1, 23-32-29, sdtr dr pipe 2855 ft.

EDISON—General Pet. Corp.'s Seale 10, 5-30-29, rig. Midway Northern Oil Co.'s Brown 1, 29-29-30, dr shell 3719 ft.

GOULD HILLS—Bomke and Ball's 1, 19-29-30, dr shale 1990 ft. Elmer Oil Co.'s 1, 2-29-20, new lcn. Exeter Oil Co.'s 2, 1-29-20, dr shale 722 ft. Ozena Oil Co.'s 1, 27-29-21, co 2900 ft, td 2928 ft.

SHALE HILLS—Oildale Oil Co.'s 1, 13-27-18, fsh for bailer 615 ft.

RIO BRAVO—Pacific Coast Oil Co.'s 1, 15-19-25, dr 100 ft, cable tools.

SAN EMIDIO—Standard's 1, 35-11-22, dr clay 1900 ft. Union's 1, 5-10-21, rig.

SHAFTER—Elmer Oil Co.'s 1, 8-28-25, dr shale 2662 ft.

SEMITROPIC—Lincoln Drilling Co.'s Kerwin 1, 21-26-22, dr 3948 ft.

SANTA BARBARA COUNTY

CARPENTERIA—Continental's Franklin 1, dr 1000 ft.

SANTA BARBARA—Channell Oil & Dev. Co.'s 1, 29-4-27, dr sand and shale 6260 ft. Southwest Producing Co.'s 1, 2-4-28, dr shale 1620 ft.

VENTURA COUNTY

BARSDALE—Triple A Investment Co.'s Elkins 1, 28-4-19, plugged to 2875 ft, trying to locate water.

CAMARILLO—American Oil Co.'s 1, 33-2-20, dr basalt 563 ft.

OJAI—Continental's Fox 1-M, 21-4-22, dr brown shale 2173 ft; Thompson 1, 22-4-22, dr shale 2500 ft. R. E. Burke's McDonald 1, 11-4-23, dr shale 2975 ft. E. J. Miley's Casistas 2-A, co 725 ft, td 775 ft.

PIRU—Petroleum Securities Co.'s Diablo 1, 26-5-10, dr shale 6275 ft. Temescal Pet. Co.'s 5, 3-4-28, dr sand 3075 ft. Wasibi Oil Co.'s Bishop 2, 34-3-19, dr shale 2575 ft.

SANTA PAULA—W. W. Bryant's Anlauf 1, 21-4-21, dr shale 285 ft. San Pedro-Pt. Fermin Synd.'s 1, 13-4-21, sr to cmt 12½-inch cas, td 680 ft.

SATICOY—Ohio Oil Co.'s 1, SW¼ 32-3-21, new lcn. Standard's Citrus 5, dr gray sand 2929 ft.

SIMI—Emma F. Exline's Seaton 1, 32-5-21, fsh for dr pipe, td 2400 ft. Pirate Oil Co.'s 1, 33-3-21, rigging up rotary. Shell's Berylwood 1, 33-2-20, sd 7210 ft.

SOUTH MOUNTAIN — Ring Pet. Corp.'s Converse 1, 3-3-21, dr shale 4682 ft.

VENTURA—Star Pet. Co.'s Canet 1-A, 13-3-23, sd 6775 ft.

MISCELLANEOUS

FRESNO COUNTY—Currency Pet. Co.'s 1, 28-21-14, dr 150 ft. C. C. Boatright's 1, 27-19-19, rigging rotary. Fresno-Madera Oil Co.'s 1, 18-12-21, co 4150 ft.

KINGS COUNTY — General Pet. Corp.'s Oeschner 2, 30-26-18, will deepen from 5290 ft, td 6765 ft. Milham Exploration Co.'s Elliott 1, 2-22-17, well shut in after blowing wild for three weeks. South Dome Oil Co.'s 1, 35-24-19, will deepen from 3100 ft.

MONTEREY COUNTY—Marland's 1, 32-24-11, sdtr 4860 ft.

SAN LUIS OBISPO COUNTY—Panorama Oil Co.'s 1, 7-31-21, dr shale 3100 ft. San Luis Synd.'s 1, 31-31-13, cmt 10-inch cas 1335 ft. Texas Pacific Coal and Oil Co.'s Dutton 2, 25-32-14, rig. Union's Russ 1, 34-32-15, redr 2460 ft; Chandler 1, 12-32-15, 12½-inch cas cmt on bottom, td 2000 ft.

SAN MATEO COUNTY—Shell's Butt 1, 21-6-5, coring 3345 ft.

SONOMA COUNTY—Shell's Doss 1, 8-5-7, dr sand and shale 578 ft.

EAST TEXAS

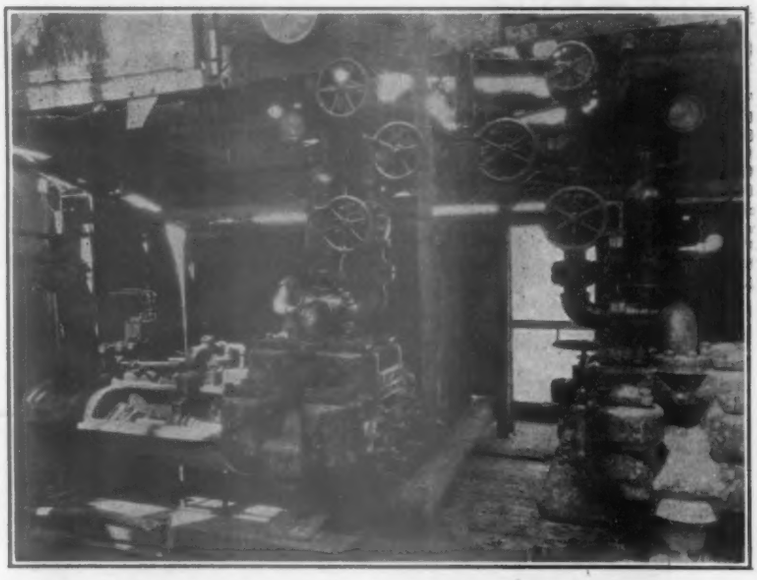
BOWIE COUNTY—Hooks O. & G. Co.'s Rosenberg 1, King sur, sd wo 3086 ft.

CAMP COUNTY—Rogers et al's Enfelt 1, Montgomery sur, sd wo 1978 ft.

CASS COUNTY—Davis & Pigg's Lambert 1, Lambert sur, sd wo 1952 ft.

RED RIVER COUNTY—D. M. Buffington's Hoosier 1, Hughart sur, sd 1000 ft. Bert Lon-

7,957 feet to Oil Sand



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GARDNER-DENVER

Say you saw it in The OIL WEEKLY

genheim's Atkinson 1, Lonson-Moore sur, sd wo 1065 ft. Johnson Pet. Co.'s Randolph 2, Dean sur, sd wo 1400 ft.

SHELBY COUNTY—Chaparral Oil Co.'s Holt 2, Matthew Moore sur, sd wo 1619 ft. Gulf Ref. Co.'s Pickering Lbr. Co. 1, Harvey sur, cemtd 6⅝-inch casing 3239 ft.

UPSHUR COUNTY—F. S. Freeland's Newsom 1, Butler sur, arr to make d. s. test 2020 ft. Hudspeth 1, Jackson sur, dk pat.

NORTH LOUISIANA

BIENVILLE PARISH—Baca Drilling Co.'s State 1, 16-16-10w, temp abn 2561 ft. S. P. Borden's L. & A. 2, 1-15-8, sd wo 2560 ft. W. G. Gray, Tr.'s Johnson 1, 21-18-6, rig up.

BOSSIER PARISH—Ark. Nat. Gas Corp.'s Wlikinson 1, 5-22-11, temp abn 3068 ft. Big Ben Oil Co.'s Stewart 2, 15-18-12, rig up. Doern et al's Bolinger 1, 9-22-11, sd 4317 ft. Northwest La. Gas Co.'s Pine Woods Lbr. Co. 7, 33-23-11, wosr 3-41 ft. Triangle Drilling Co.'s Bulkley 1, 9-20-13, dr 3460 ft. Walker et al's Antrim 1, 28-22-13, sd 2985 ft.

CADDO PARISH—Tidal Oil Co.'s McGrary 1, 23-19-16, dr 800 ft (formerly carried as David M. Lide's McGrary 1). Gulf Ref. Co.'s Attaway 1, 1-18-15, dr 4315 ft. Woodley Pet. Co.'s Whitehurst 2, 7-16-12, rig up.

CATAHOULA PARISH — Lochnager O. & G. Co.'s Taliaferro 1, 26-9-6e, sd 900 ft. Texas Co.'s Tensas Delta B-1, 4-10-6e, dr 3310 ft.

CLAIBORNE PARISH—Dixie Oil Co.'s Gilbert 1, 27-21-5w, dr 2878 ft. El Dorado Chief Oil Co.'s Baker 1, 26-20-7, sd 1765 ft. C. T. Lue's Taylor 1, 29-22-6, lcn. Smitherman & McDonald's Miller 1, 17-23-8, tested sw 3150 ft, dr 3240 ft.

DE SOTO PARISH—Benedum & Trees Oil Co.'s State 1, 22-14-12, dr 1020 ft. Benson O. & G. Co.'s Jackson 1, 3-10-13, rig up. Carlton Drilling Co.'s Stephens 2, 12-11-16, sd 350 ft. R. O. Roy's Sample 1, 1-13-14, rig up. Whittaker 1, 4-13-13, cemented 6-inch csg 2773 ft, dr in lime 2810 ft. Warren & Carruthers' Ramsey 1, 33-13-16, sd wo 1443 ft. Luke Case, Tr.'s, Boatright 1, 3-10-13, lcn.

EAST CARROLL PARISH—Palmer Corp.'s Carroll Land Co. 1, 21-19-11e, dr 2864 ft; Hamley 1, 27-20-11e, sd wo 2930 ft.

FRANKLIN PARISH—Davis et al's Moore 1, 12-11-6e, dr 930 ft.

MADISON PARISH — Mid-American Pet. Co.'s Yerger 2, 51-16-14e, sd 285 ft. Ruston Drilling Co.'s Sondheimer 1, 24-18-11e, dr 3060 ft.

MOREHOUSE PARISH—United Carbon's Bastrop 1, 18-21-6e, sd wo 3175 ft.

NATCHITOCHES PARISH—Robeline O. & G Co.'s Cassady 1, 7-8-9w, sd 1100 ft.

OUACHITA PARISH—G. E. Jordan's Wall 1, 12-18-3e, dr 3128 ft. Magnolia Pet. Co.'s Central 1, 1-19-4e, sd 185 ft. Ouachita Nat. Gas Co.'s D'Arbonne B-2, 25-19-2e, dr 2399 ft. Phillips et al's School Fee 1, 16-16-4e, sd 1930 ft.

RAPIDES PARISH — G. E. Silbertson's Willemach 3, 13-5n-4w, sd 2250 ft. Glenmora Pet. Co.'s Fee 1, 1-2n-2w, sd 3850 ft.

RED RIVER PARISH — Rock Pet. Co.'s Pierson 1, 12-14-11, reaming to set 6-inch csg at 1761 ft.

RICHLAND PARISH — Ruston Drilling Co.'s Ethridge 1, 28-17-6e, lcn. Wilson et al's Buie 1, 17-15-7e, rig up.

SABINE PARISH—Doern et al's Pickering Lbr. Co. 1, 17-4-11, dr lime 4320 ft. R. L. Gay's Bowman-Hicks 2, 14-7-14, rig up. Texas Co.'s Hamlin 1, 28-10-13, sd 3579 ft.

TENSAS PARISH—Enochs et al's Curry 1, 39-11-12e, tested sw 3569 ft, 23 ft broken sand, arr to deepen.

UNION PARISH — Carter & Wingfield's Clark A-2, 7-23-1e, bailing 400 ft oil in hole 10 ft sand, td 2295 ft. Clark A-3, 8-23-1e, dk. Hudson 2, 7-23-1e, sd 2190 ft. Security Trust 2, 7-23-1e, lcn; Security Trust 3, 23-23-1w, dr 2300 ft; Hudson 3, 7-23-1e, lcn. H. C. McDonald's Union Sawmill 1, 18-23-1e, lcn. Woodley & Fox's McLeod 1, 13-19-1e, sd 200 ft (formerly carried Jones & Mullins). R. W. Rhodes' Upshaw 1, 14-23-2w, dk.

WEBSTER PARISH—Virgil Helm's Maxwell 1, 7-22-9, rig up. Jones et al's Elkins 1, 33-23-9, est one mil ft gas, td 2690 ft, sd wo. Magnolia Pet. Co.'s W. P. Bond 1, 5-22-9, dr 747 ft. H. H. Bratnon 1, 5-22-9, lcn; M. Branton 1, 5-22-9, lcn; Oakes-Rosenberg 1, 29-23-9, tested 600 ft sw, show gas, td 2777 ft so; Scroggins 1, 1-22-11, dk. Northwest La. Gas Co.'s Pinewoods Lbr. Co. 8, 37-23-11, dr 3156 ft.

OKLAHOMA

WOODS COUNTY—T 28n, R 18w, Sec. 11, George Vincent et al's Freedom 1, c sw, ponds.

HARPER COUNTY—T 27n, R 21w, Sec. 24, A. F. Kopisch Oil Co.'s M. Selman 1, nec se, spudded and sd.

WOODS COUNTY—T 27n, R 15w, Sec. 20, Sooner State Oil Co. & E. R. Black's Marcum 1, c sw, spudded and sd.

GRANT COUNTY—T 26n, R 4w, Sec. 34, Sooner State Oil Co.'s Royce 1, swc nw, sd 550 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A. Vincent and Nat'l Union's McNeal 1, nwc ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec. 14, Hoffer Oil Co.'s Cooper 1, nwc se, sd 4182 ft, litigation.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Vollner 2, nec se ne sw, lost tools 5640 ft, sd.

TEXAS COUNTY—T 1n, R 18 E.C.M., Sec. 11, Three Way Oil Co.'s Price 1, sec nw, sd 3490 ft.

WOODWARD COUNTY — T 24n, R 17w, Sec. 32, Otstot Dev. Co.'s Simmons 1, sec, sd 1500 ft.

WOODS COUNTY—T 24n, R 13w, Sec. 18, Miller et al's Copenhaver 1, nwc, spudded and sd.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, sec nw, sd 4755 ft.

WOODWARD COUNTY — T 23n, R 20w, Sec. 9, Billy Oil Co.'s Wyatt 1, c se, sd 500 ft. T 21n, R 19w, Sec. 15, Burgoyne Bros.' 1, swc se ne, dr 1950 ft. T 21n, R 21w, Sec. 25, Sharon's Elnome 1, swc, sd 3025 ft, rig blown down.

GARFIELD COUNTY—T 20n, R 4w, Sec. 9, Marland Oil Co.'s Looman 1, nec se, sd casing parted, 5735 ft. Sec. 12, Marland Oil Co.'s Miller 1, swc, sd 4586 ft.

DEWEY COUNTY—T 18n, R 15w, Sec. 9, Huckelby & McCoy's Perfect 1, nec, sd 4395 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33,

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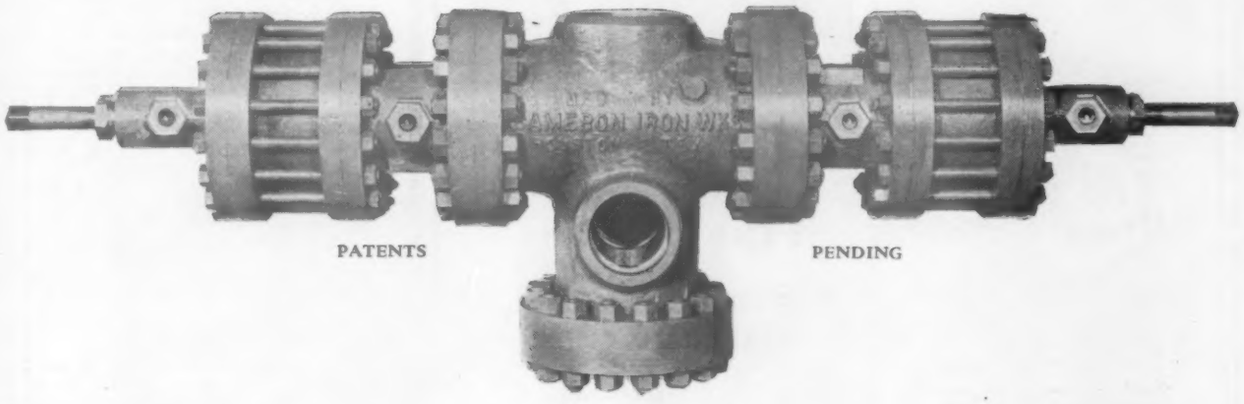

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The Preventer is operated by a steam piston attached to each ram, and working in cylinders that are equipped with special cushion valves. These valves regulate the entrance of the steam and cause the rams to settle securely around the drill stem without sudden or jerky blows.

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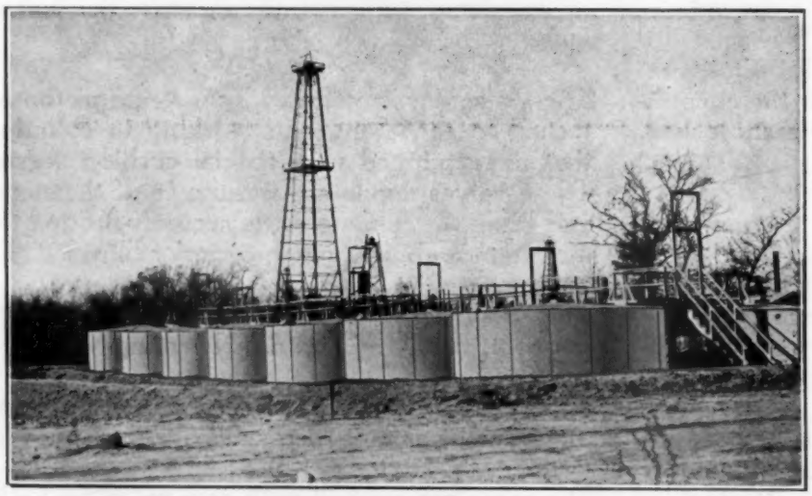

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KINGFISHER COUNTY — T 16n, R 6w, Sec. 27, Crawford & McKenna'sSturgeon 1, nec sw, dr 4645 ft.

BLAINE COUNTY—T 15n, R 12w, Sec 26, W. J. Donley Dickens 1, sec ne, dr 4030 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec. 9, A. D. Spears' Piatt 1, swc ne, sd 3223 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec. 18, Slick & Bailey's Lufkin 1, c ne se, sd 4510 ft. T 12n, R 3w, Sec. 15, Cromwell et al's Thompson 1, swc ne ne, co. T 11n, R 3w, Sec. 24, I. T. I. O. Co.'s Park1, c se se, dr 2955 ft. Gas mudded off.

OSAGE COUNTY—T 25n, R 6e, Sec. 25, Amerada's 1, nec sw, sd 2912 ft.

PAWNEE COUNTY—T 22n, R 5e, Sec. 23, Washoma Oil & Gas Co.'s Buffalo 1, sec nw, shot 100 qts. 3134-90 ft, co.

LINCOLN COUNTY—T 16n, R 4e, Sec. 15, J. V. Bailey et al's House 1, c ne se, rigging up rotary. T 15n, R 6e, Sec. 23, Shaffer O. & Co. et al's Pinkston 1, nec sw, dr 2141 ft, hfw. T 12n, R 6e, Sec. 10, Kingwood Oil Co.'s Jennings 1, swc, dr 3000 ft.

CREEK COUNTY—T 14n, R 9e, Sec. 1, Shaffer O. & R. Co.'s Polk 1, nwc ne se, dr 2440 ft.

OKFUSKEE COUNTY—T 13n, R 10e, Sec. 8, Dixie Oil Co.'s Drew 1, nec sw, Dutcher 2678-84 ft, 600 ft oil in hole, dr 2712 ft

MUSKOGEE COUNTY—T 13n, R 18e, Sec. 33, L. T. Haynie's Linder 1, c se, 2290 ft, co repair boiler.

McINTOSH COUNTY—T 12n, R 18e, Sec. 15, A. B. Wolfe et al's Beck 1, nwc se, spudded and sd.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, swc nw se, 3M gas 4613-35 ft, dr 5456 ft, boiler in hole.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nwc ne sw, sd 1800 ft, rebldg rig.

LATIMER COUNTY—T 5n, R 18e, Sec. 15, Limestone O. & G. Co.'s Murray 1, swc, set 10-inch at 1900 ft, dr 1910 ft.

SEMINOLE COUNTY—T 11n, R 6e, Sec. 27, Fuhrman Pet. Co.'s Fay 1, sec nw sw, dr 4410 ft, bad hole.

POTTAWATOMIE COUNTY—T 9n, R 4e, Sec. 13, Atlantic & Gypsy's Deleware 1, sec ne ne, cemt 8-inch 3990 ft. T 9n, R 5e, Sec. 30, Magnolia's Germany 1, sec nw dr 4049 ft. T 8n, R 2e, Sec. 24, Superior's Jones 1, swc nw ne, fish 4920 ft. T 8n, R 4e, Sec. 15, Phillip's Sparkman 1, sec sw, td 4065 c. o.

SEMINOLE COUNTY—T 8n, R 8e, Sec. 4, McCullough's McGilbray 1, swc ne, rigging up standard tools.

HUGHES COUNTY—T 8n, R 9e, Sec. 18, Pure Oil Co.'s Fixico 1, nec sw, cemt 8-in 4010 ft. T 8n, R 10e, Sec. 1, Bauer et al's Penn 1, nwc sw ne, sand 2888-90 ft, 8 m gas u.r. 8-in.

CLEVELAND COUNTY—T 7n, R 1w, Sec. 15, Sooner Oil Co.'s Vandeveer 1, nec nw sw, sd 3120 ft.

POTTAWATOMIE COUNTY—T 7n, R 2e, Sec. 17, T. B. Slick's Spangler 1, nwc se nw nw, drlg 5240 ft. T 7n, R 5e, Sec. 14, Champlin's Harber 1, swc ne sw, drlg 2825 ft.

SEMINOLE COUNTY—T 7n, R 6e, Sec. 7, Simon & Beam's Palmer 1, nec nw ne, rig. Sec. 17, Empire's Harjo 1, sec nw se, cemtg 8-in 4330 ft.

SEMINOLE COUNTY—T 6n, R 7e, Sec. 4, Shaffer's Carolina 1, sec sw ne, ts 4865, td 4875 ft, HFW plugging.

McCLAIN COUNTY—T 5n, R 3e, Sec. 29, Empire's Bonner 1, sec nw nw, rur.

SEMINOLE COUNTY—T 5n, R 6e, Sec. 11, T. B. Slick's Harjo 1, nwc ne, td 3685 ft, fish 6-in.

HUGHES COUNTY—T 5n, R 9 e, Sec. 17, E. W. Whitney's Huddleston 1, sec sw, set 6-in 2475 ft.

GARVIN COUNTY—T 4n, R 3e, Sec. 10, Garland Oil Co.'s Strickland 1, swc nw sw, drlg 3240 ft.

PONTOTOC COUNTY—T 4n, R 4e, Sec. 20, Roxana's Smith 1, nwc sw, sd 1600 ft.

COAL COUNTY—T 2n, R 8e, Sec. 5, Wichtex Oil Co.'s Folsom 1, c nw nw, location.

MURRAY COUNTY—T 1e, R 2e, Sec. 17, Revels and McGee's Wolfe 1, nwc, sd 1355 ft.

COAL COUNTY—T 1n, R 8e, Sec. 35, W. E. McGraw et al's Patton 1, swc se ne, T. S.

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4770, td 4793 ft, hfw pb to 1907 ft. T. 1n, R 9e, Sec. 24, Galbreath et al's Jones 1, swc se, sd 1595 ft.

CUSTER COUNTY—T 14n, R 14w, Sec. 1, W. E. Witt's Wellman 1, c se sd, litigation.

CADDO COUNTY—T 12n, R 11w, Sec. 15, Abernathy & M.'s Ashton 1, c nw, sd 4520 ft for casing.

ROGER MILLS COUNTY—T 11n, R 26w, Sec. 4, L. C. Hivick's Davis 1, c nw ne, 700 ft sd.

CADDO COUNTY—T 10n, R 12w, Sec. 28, Magnolia's Shelby 1, swc, drlg 4447 ft.

BECKHAN COUNTY—T 8n, R 25w, Sec. 1, E. L. Martin's No. 1, nwc se, drlg 420 ft. T. 8n, R 21w, Sec. 33, Day Oil Co.'s Ault 1, c nw nw, sd 60 ft.

KIOWA COUNTY—T 7n, R 15w, Sec. 35, David Malernee's Van Kirklan 1, nwc sd 858 ft. T 6n, R 15w, Sec. 6, Johnson-McDowell's No. 1, c sw ne, sd 1750 ft.

CADDO COUNTY—T 6n, R 12w, Sec. 29, W. J. Hartley's Gilbreath 1, sec nw se, (owdd) sd 3394 ft.

GRADY COUNTY—T 5n, R 6w, Sec. 31, Wirt Franklin Pet. Corp.'s Long 1, sw c ne, location. T 3n, R 7w, Sec. 4, Commerce Dev. Co.'s Blunt 1, c ne nw, cmt 6-in, 2436 ft.

JACKSON COUNTY—T 1n, R 20w, Sec. 4, Altus Dev. Co.'s Northington 1, nec, sd 1100 ft.

STEPHENS COUNTY—T 1n, R 7w, Sec. 2, Stahl & Burris's Jefferson 1, sec ne nw, drlg 1510 ft.

JACKSON COUNTY—T 1s, R 20w, Sec. 33, Stanley-McGregor's No. 1, swc nw sw, sd 1800 tf.

STEPHENS COUNTY—T 1s, R 7w, Sec. 12, Ilsing, Russell & Nance's Houston 1, nec sw sw, sd 965 ft.

KIOWA COUNTY—T 2s, R 16w, Sec. 6, Landfair's No. 1, sec sw se, 2510 ft, sd.

COTTON COUNTY—T 2s, R 9w, Sec. 33, C. E. Crane's Sturgeon 1, c nw ne, sd 3505 ft. T 4s, R 12w, Sec. 16, Guiler & Pyson's Thomas 1, sec sw, drlg 1630 ft.

TILLMAN COUNTY—T 5s, R 15w, Sec. 3, A. N. Pearson's Indian 2, swc (twin to No. 1), drlg 1845 ft.

JOHNSON COUNTY—T 1s, R 7e, Sec. 29, Smitty-Kinsley's Lane 1, sec nw, fish 948 ft.

KANSAS

BARBER COUNTY—Barber Oil Co.'s Blunk 1, c ne nw, 20-34-13w, dr 4655 ft.

BARTON COUNTY—McJilton et al's Evanston 1, sec nw, 34-17-11w, rig.

BUTLER COUNTY—LaRobb et al's Bronsenger 1, nec sw, 24-27-3, rig.

CHASE COUNTY—Griener & Fowler's Carson 1, nec ne, 9-21-7, sd 3150 ft.

COWLEY COUNTY—Pyle & Suttler's Lindstrum 1, se ne, 9-35-4e, fsh 900 ft. Prairie O. & G. Co.'s Shane 1, se nw, 13-33-3e, sd 3410 ft. Empire-Marland-Twin State's Feaster 1, nw ne, 36-32-5e, dr 570 ft. T. B. Slick et al's Alspaugh 1, sw ne, 27-31-5e, dr 2350 ft.

EDWARDS COUNTY—Amerada-Wilcox O. & G. Co.'s Teansil 1, nw, 32-25-19w, dr 3315 ft.

ELLIS COUNTY—Rush Oil Co.'s Gatewood 1, nwc nw, 4-15-20w, sd 1100 ft. Empire O. & R. Co.'s Wann 1, ne, 31-12-19w, dr 2315 ft. Marland Prod. Co.'s Vine 1, sw se, 27-11-19w, dr 1375 ft. Transcontinental Oil Co.'s Boetcher 1, nwc se sw, 21-13-19w, dr 3080 ft. Phillips Pet. Co.'s Brull 1, c nw¼, 34-14-17w, spd & sd. Phillips' Shultz 1, c ne¼, 5-12-17w, set 6-in at 3285 ft. Labette Oil Co.'s Urbank 1, ne nw nw, 19-15-16w, dr 1850 ft.

GEARY COUNTY—Pioneer Oil Co.'s Chase 1, sec se, 10-1-7, dr 3440 ft.

GREENWOOD COUNTY—P. H. Ballew's Bright 1, nec sw, 22-27-12, ds 1210 ft.

HARPER COUNTY—Amerada Pet. Corp.'s Mendiville 1, c se se, 24-34-6w, fighting cave, 5360 ft. Sam Jarvis' Warneke 1, sec sw, 4-34-3w, sd 4685½ ft, with 700 ft water.

JEFFERSON COUNTY—Wichita Oil Co.'s Simpson 1, nwc sw sw, 19-10-17, ru and sd.

LANE COUNTY—Robinson et al's Dickerson 1, swc nw se, 11-18-27w, set 8-in at 2625 ft.

MARION COUNTY—Empire O. & R. Co.'s Jensen 1, se nw, 26-22-5e, rig.

MITCHELL COUNTY—Ben Gurley et al's Crombil 1, c ne ne, 32-9-7w, sd 3535 ft.

MORRIS COUNTY—Hugh Faulder's Wendt 1, swc se se, 18-15-5e, moving in tools. Skelton et al's Iles 1, nwc nw, 25-16-5, rig.

McPHERSON COUNTY — Galt-Brown's Blaine 1, c ne, 18-17-1w, sd 3354 ft. hfw, 3200-15 ft. McPherson County Gas Co.'s Stein 1, sw ne sw, 17-18-1w, dr 1475 ft. John Heron's Vosshell 1, nec ne, 9-21-3w, spd & sd, taken over by Frank France.

OTTAWA COUNTY—Anderson et al's Bank, nec nw, 28-10-2w,dr 2710 ft.

PAWNEE COUNTY—F. C. Troupe's Lovett 1, cel ne ne, 31-21-16w, sd 1650 ft.

PHILLIPS COUNTY—Watsonian Oil Co.'s Marklein 1, ne sw, 21-3-19w, dr 1912 ft.

RICE COUNTY—Allison & Fitzwilliams' Poland 1, nec sw ne, 36-19-8w, cellar.

ROOKS COUNTY—Phillips Pet. Co.'s Overholtzer 1, c se, 30-9-16w, dr 3400 ft. Empire G. & F. Co.'s Doodrill 1, nec se nw, 15-8-18w, hfw, 3445-50 ft, abn. Krueger et al's Poore 1, nec ne, 14-8-6w, sd 2865 ft.

RUSH COUNTY — Valerious & Cheney's Sheverman 1, nwc se nw, 27-17-17w, dr 3486 ft. Sinclair's Beiching 1, nw ne nw, 9-16-16w, dr 1180 ft.

RUSSELL COUNTY—Midwest Exploration Co.'s Austin 1, nec ne, 36-12-16w, dr by pipe, 3045 ft.

SALINE COUNTY—M. Esty et al's Peterson 1, c ne, 6-16-5w, spd & sd. Nathan Jones et al's Robertson 1, nw sw, 27-14-2w, sd 1500 ft.

SEDGEWICK COUNTY—LaRobb Oil Co.'s Davis 1, ne sw se, 36-25-1w, dr 600 ft. Bu-Vi-Bar Oil Co.'s Steel 1, se, 1-26-2w, spd. Barnsdall Oil Co.'s Samuels 1, ne nw, 24-25-1e, dr 1100 ft. Barnsdall Oil Co.'s Faber 1, sw nw, 6-27-1w, dr 1245 ft. Allison & Fitzwilliams' Doane 1, ne nw ne, 24-26-1w, co at 3031 ft. Van Zandt & Mason's Rox 1, c ne sw, 19-25-1w, dr 585 ft.

SEWARD COUNTY—Nelson & Ash Pyle 1, nec ne, 14-33-33w, sd 5036 ft, ½ m gas at 2705-15 ft.

SHERMAN COUNTY—A. L. Henson et al's Murry 1, nec se nw, 22-7-40w, sd 3035 ft.

STEVENS COUNTY—W. Sidwell et al's Kelly 1, swc ne, 16-34-38w, sd 1160 ft. Trees Oil Co.'s Unknown 1, sw ne sw, 3-35-38w, sd 600 ft.

SUMNER COUNTY—Goe. Dickey's Knox 1, swc ne, 3-35-1w, set 6-in at 3550 ft. Gypsy Oil Co.'s Williams 1, nw se sw, 16-35-3w, dr 3580 ft. McCulloch et al's Tuttle 1, sw ne, 29-34-1w, dr 2400 ft. Otstot et al's Volker 1, nwc ne, 9-35-1, rig. Helmerich & Payne's Warlock 1, se ne, 8-34-2e, dr 2380 ft. Davidson et al's Strickland 1, swc se 12-35-1w, rig. Rolland et al's Pickens 1, nec nw ne, 27-30-14w, dr 4010 ft.

TREGO COUNTY—Central Commercial Oil Co.'s Ellis 1, nec sw ne, 20-13-21w, dr 2125 ft.

ARKANSAS

Completions

JOHNSON COUNTY—
Ark. Nat. Gas Corp., Bynum 1, 13-10-24 ..... ¶8 3126
Ark. Nat. Gas Corp., O. L. Hudson 1, 14-10-24 ..... ¶10 2795

ASHLEY COUNTY—Atlantic O. P. Co.'s Moffatt 1, 28-16-8, reaming to bottom 3580 ft. S. E. Harris et al's Holmes 1, 9-16-7, sd 151 ft.

CLARK COUNTY—McKenzie Oil Co.'s Eakins 1, 9-11-19, arr to resume dr at 1700 ft. Wm. Henry, Tr's Clark 1, 34-9-21, sd 1385 ft.

CALHOUN COUNTY—Amerada Pet. Co.'s Matlock 1, 10-12-13 tested dry thru d. s. 3284 ft, reaming to bottom 3400 ft.

CHICOT COUNTY—W. S. Smith's Meyer 1, 14-19-2, sd 850 ft. J. C. Marcum's De-Yambert 1, 5-19-4, sdwo 1500 ft. Joe Crawford's Cashion 1, 14-18-2, sd wo 1800 ft. Hunter's Sawyer 1, 19-18-2, tested dry thru d. s. 2972-91 ft, dr 3047 ft.

COLUMBIA COUNTY—G. W. Dawley et al's Fullenwider & Kitchen 1, 12-17-22, sd wo 2847 ft. Calgo Oil Co.'s Primm 1, 9-18-17, rig up to resume dr 3001 ft.

DALLAS COUNTY—Robt. H. Dedman's Hillman 1, 20-10-13, temp abn 1145 ft.

FAULKNER COUNTY—Gold Creek O. & G. Co.'s Stermer 1, 17-4-13, sd 3462 ft.

JOHNSON COUNTY—Ark. Nat. Gas Corp.'s Bynum 1, 13-10-24, 8 mil ft dry gas t. d. 3126 ft, 16 ft sand; Houston 1, 15-10-24, dr 2203 ft. O. L. Hudson 1, 14-10-24, estimated ten mil ft gas td 2795 ft.

LINCOLN COUNTY—Pine Prairie O. & G. Co.'s Carter 1, 33-10-6, sd wo 2126 ft.

LOGAN COUNTY—Ark. Nat. Gas Corp.'s

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- Wilson Tongs and Elevators
- Regan Equipment
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- Wickwire Spencer Wire Lines
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- A. H. Neilson Rod Sockets
- Lion Paw Belting
- Lucey Drilling Equipment
- McClatchie Automatic Catheads
- McClatchie Cement Heads
- Armco Tubing
- Hughes Tool Company Products
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- Switzer Rubber Crown Metallic Packing
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W. H. Parks 1, 26-8-24, trying to sidetrack 8¼-in csg at 2361 ft, td 3208 ft.

OUACHITA COUNTY — McDonald Bros. Wilson 1, 25-15-18, sd for fuel 2800 ft. J. E. Crosbie's Primm 1, 23-15-16, cmt 6-in csg 2006 ft.

UNION COUNTY—McDonald Bros.' Mayfield 1, 29-19-15, dr 1135 ft. Rice et al's Heinman & Meyers A-1, 23-18-16, sd 1180 ft. Stark et al's Powell 1, 35-18-15, rig up. Imperial O. & G. Co.'s Goodwin 1, 26-17-16, tested s. w. 2586-2591 ft, coring 2591 ft. Grimes Bros.' Hill 2, 7-18-14, rig up w.o. Tate & Morefield's W. W. Smith 1, 6-18-13, dr 2420 ft. Tharpe Drilling Co.'s List 1, 25-17-15, drill stem stuck 3050 ft. Garrett-Modisette Drilling Co.'s Murphy Land Co. 1, 30-17-17, dr 2820 ft. Foster et al's Murphy Land Co. 1, 22-17-17, rig up. Hawkins et al's Goodwin 1, 6-17-15, dk.

MOUNTAIN STATES

WYOMING

ALBANY—Union of California's 1, 1-16-76, sp.

BIG HORN—Utah Southern Oil Co.'s 3, 26-56n-97w, examining cuttings at 3763 ft. Producers & Refiners' 3, 24-56n-98, pulling 8¼-in at 2706 ft. Prairie O. & G. Co.'s Chilcote 1, 35-56n-95w, dr 325 ft. P. & R.'s South Frannie 1, 7-57-97, dr 350 ft.

CARBON—P. & R.'s 3, 2-19-88, wtg dr pipe at 4003 ft. Red Feather Oil Co., 35-13-92, rig up. Indian Pet. Corp., ne 2-17n-89w, fsh 750 ft. P. & R.'s O'Brien Springs 1, 1-24-88, dr 264 ft.

FREMONT—Martin Falk, 9-31n-98w, dr 2450 ft. Gates & Homan, 6-33-94, mvg in.

HOT SPRINGS—Texas Prod. Co., sw 23-45n-100w, dr 100 ft.

JOHNSON—Matthew Foreman et al's Crazy Woman 1, 7-47-82, resume with rotary at 2000 ft.

LINCOLN—Midwest Ref. Co.'s Waterfall 1, 35-22-115, dr 1635 ft. Midwest Refining Co.'s Gray's River 1, 25-37-113, dr 197 ft.

NATRONA—Weisman et al's 2, 1-36-82, gas well.

PARK—Cal. Exploration Co. and P. & R.'s Pitchfork 1, 14-48n-102w, skid rig and start new hole. Resolute Oil Co., nw 17-57-101, reaming 15½-in to 1330 ft. S. C. Ferdig et al's Nelson 1, 4-51-102, set 12½-in at 778 ft. Oregon-Wyoming Oil Co.'s 1, sw 30-52-101, dr 850 ft. Ohio Oil Co.'s Pulley 1, 27-53-101, cas cem at 4752 ft. Lenco Oil Co.'s Pulley 1, 25-53-101, rigging to resume at 100 ft. Cal. Explo. Co.'s 1, 29-48-103, co after shot, 300 ft oil in hole.

SWEETWATER — Prairie O. & G. Co.'s Tucker 1, 18-13-99, dr 4465 ft. Ohio Oil Co.'s Humphreys 1, 2-12-101, dr 550 ft. Sormir Pet. Co., 13-21-100, sd 1330 ft. Hiland Oil Co.'s Jackson 1, se 2-20-104, lcn. Hiland Oil Co.'s Lennon 1, se 32-21-103, lcn. Vermilion Oil Co., sw 16-12-99, sp.

SUBLETTE—California Co.'s Wyss 1, 12-32n-115w, dr 1004 ft. California Co.'s Buchell 1, 11-29-115, dr 1986 ft.

UINTA—California Co.'s U. P. 1, 7-17-116w, fsh casing. Winston Oil Co.'s 1, ne 23-14-118, dr 790 ft, oil and gas showing.

WESTON—Wyoming Drilling Syndicate, ne, 15-44n-64w, dr below 3600 ft.

MONTANA

BIG HORN—Whiteside et al, 21-6s-35e, dr 550 ft.

BLAINE—Ohio Oil Co.'s Winngert 1, 3-34n-32e, cas cem at 1800 ft.

CASCADE—Winther et al's Roth 1, sw 11-22-1e, dr 1788 ft. Lone Star Montana Oil Co., sw 13-21-3e, cas 727 ft. Eden Oil & Gas Co., 27-18-4e, dr 575 ft.

CARBON—Ohio Oil Co.'s Northern Pacific 1, 11-7s-21e, fsh 4458 ft. Local Oil Co.'s 1, 25-9s-25e, dr 2150 ft.

CHOTEAU—Geraldine O. & G. Co., ne 1-21-11e, cas cem 1130 ft and dr ahead. Laffea Oil Co., 6-10-25, moving in. Williston Shelby O. & G. Co.'s Glack 1, 12-28-11e, dr 2675 ft.

FERGUS—Mineral Research Co.'s 2, 13-17n-23e, fsh tools 975 ft. Melton Corp.'s 1, se 24-21n-17e, dr 2660 ft.

GALLATIN—California Co.'s Cottonwood 1, 35-5n-7e, rig up.

HILL—Jones Oil Co.'s Magnell 2, ne 32-34-12, rig. McFarland et al's Boxelder 1, sw 15-30-13e, sd 1900 ft.

JUDITH BASIN—Gem Oil Co., 15-16-10e, rig up, operation delayed by bad weather. Judith Basin Oil Co., 39-19-12e, dr 1210 ft.

LIBERTY—Sunburst O. & R. Co.'s Bear's Den 1, sw 17-36-6e, skid rig, td 650 ft. Square Deal Pet.'s Johnson 1, se 1-32-7e, dr 3350 ft. Mid-Rocky Dev. Co.'s Federal Lands 1, 7-33-73, sd 1500 ft. Bear's Den Oil Co.'s Whatford 1, 17-36n-6e, dr 575 ft. Western Natl. Gas Co., 27-37-4e, lcn.

MADISON—New Day Oil Co.'s 1, ne 29-59-1e, dr 940 ft.

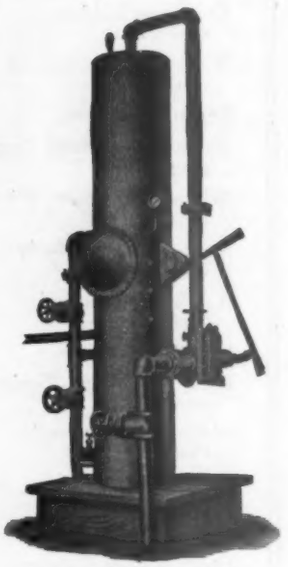
PONDERA—Peerless Oil Co.'s State 1, 16-27-3w, dr 1885 ft. Hiland Oil Co.'s Van Daele 1, ne 35-30-3w, dr 3780 ft. Trapp Synd., 35-28-15e, dr 760 ft.

SWEETGRASS—Shoshone Consolidated's 1, 23-2n-15e, casing trouble 3720 ft.

TETON—Archer et al, 6-23-2w, dr 1000 ft.

TOOLE—Monalta Oil Co.'s 1, 1-37-4w, sp. Wm. J. Maham's 1, 10-31-1w, dr 1500 ft.

WIBAUX—Johns & Hagen, 23-11n-57e, dr below 760 ft.



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PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending Nov. 3	Previous week	Total this month	Total this year	This week last year	This month 1927	Total same date 1927	Year total 1927
Arkansas	7	7	7	296	6	6	300	329
California	26	20	26	1,025	18	18	1,045	1,226
Louisiana	11	11	11	581	18	18	615	812
Kansas	32	9	32	900	37	37	830	972
Oklahoma	117	76	117	3,135	77	77	3,364	3,702
Texas	161	164	161	6,851	174	174	7,813	8,665
Mt. States	..	..	..	..	43	43	386	494
Total	354	287	354	12,792	373	373	14,353	16,149

CALIFORNIA

BELRIDGE—Berry Oil Co., No. 231, 30-28-21.

KERN COUNTY—C. V. L. Perry, De Villiers 1, 34-26-26. A. L. Marsten, No. 2, 27-29-27.

LONG BEACH—Richfield Oil Co., Bernstein 4, 19-4-12. Shell Co., Goddard 7, 29-4-12; Nicholson 7, 29-4-12; Horsch 4, 29-4-12; Alamitos 38, 29-4-12. W. T. Barker, Dickey 1, 24-4-13. South Basin Oil Co., No. 5, 13-4-13.

LOS ANGELES COUNTY—California Eastern Oil Co., Hasley 1, 32-5-17.

MT. POSO—A. Bruce Frame, Domion 2, 28-26-28.

RINCON — Chanslor-Canfield Midway Oil Co., Hobson B-5, 17-3-24.

SAN LUIS OBISPO COUNTY—See Canyon Oil Co., No. 1, 18-31-12.

SANTA FE SPRINGS — A. L. Marsten, Hathaway 4, 6-3-11; Hathaway 5, 6-3-11. Richfield Oil Co., Clarke 3, 1-3-12. Globe Pet. Corp., J. E. 1, 6-3-11. Commodore Pet. Co., Babonet 3, 5-3-11; Landl 3, 5-3-11. Shell Co., Slusher B-2, 6-3-11; Thompson 6, 31-2-11; G. H. N. 20, 31-2-11; G. H. N. 21, 31-2-11. General Pet. Corp., Santa Fe 146-A, 5-3-11.

SOUTH MOUNTAIN—Ohio Oil Co., No. 1, 32-3-21.

KANSAS

BUTLER COUNTY—Billy Wentz, Eckel 1, nw sw ne, 17-27-7e. Rosenthal et al, Shaffer 12, ne sw se, 4-27-6e. Davis & Hazlett, Lewis 9, se nw sw, 3-27-5e. Empire Oil & Ref. Co., Willets 5, sec sw, 27-27-5e. Amerada Pet. Corp., Bolin 1, sw se nw, 36-26-6e. O. V. Paul et al, Unger 1, csl se sw, 31-26-6e.

COWLEY COUNTY—Torrance et al, Townsite 1, lot 4R5, blk 324, City of Dexter, 13-33-6e, nwc sw se sec. Kentucky Nitrogen & Oxygen Co., Day 1, cel sw sw, 7-33-7e.

ELK COUNTY—Wilson & Jones, Walker 2, se nw se, 5-31-10e. Griggen & Bell, Colier 5, sw ne nw, 30-30-10e. McCullough, Dunlap 1, c nw ne, 13-29-9e. Sonner Gas Co., Townlot 1, nw se sw, 10-31-10o. Sherman et al, Armstrong 2, swc nw, 10-31-10e.

FRANKLIN COUNTY — Haworth & Howard, Barton 1, c nw se, 25-16-17e. Howard & Haworth, Barton 2, c ne se, 25-16-17e.

GREENWOOD COUNTY — Amerada Pet. Corp., Luthi 4, nw ne sw, 29-22-13e. Simmons & Rhodes, Luthi 2, nw sw sw, 29-22-13e. Simmons & Amerada Pet. Corp., Ellis 6, swc se, 26-23-11e; Ellis 7, sec sw, 26-23-11e. C. Kayser, Moore 1, swc, 5-26-10e.

LYON COUNTY—T. K. Simmons, Heidrick 1, sec nw, 35-21-11e.

MARION COUNTY—Empire O. & R. Co., Suderman 1, sec ne, 12-19-2e. Darby Pet. Co., Nickel 1, nec se 12-19-2e. Roxana Pet. Corp., Funk 1, nwc sw, 7-19-3e. Empire O. & R. Co., Jenson 1, sec nw, 26-22-5e.

McPHERSON COUNTY — Amerada Pet. Corp., Rosenburg 1, sw se nw, 31-18-2w.

MORRIS COUNTY — Loomis & Anderson, Sisson 1, nwc se, 14-17-7e. General Utilities Co., Pape 1, nec, 15-16-7e.

RUSSELL COUNTY—R. E. Day et al, Mermis 4, ne se ne, 32-13-15w.

SEDGEWICK COUNTY—Simmons & Canary, Hoover 1, swc se, 9-26-1e. Lewis et al, Taylor 1, nwc ne, 32-27-2e.

SUMNER COUNTY—Marland Oil Co., Warner 1, nw sw se, 23-34-2e.

ARKANSAS

UNION COUNTY—Ohio Oil Co., C. B. Nash Acct. 1 No. 2, 250-S, 275-E, nw se sw 6-17-13; C. B. Nash Acct. 1 No. 3, 330-S, 330-W, ne cor se ½ sw ¼ 6-17-13; O. L. Frazier No. 1, 260-S, 275-W, ne cor sw sw 6-17-13. C. E. Murdock et al, Union Sawmill Co. No. 2, 225-W, 225-N, se cor nw ¼ sw¼ 6-17-13. J. W. Olvey, Sample Co. No. 1, 330-S, 200-E, nw cor se¼ 7-17-13. Lion Oil Ref. Co., Union Sawmill Co. No. 4, 330-S, 330-E, nw cor nw¼ 7-17-13. Marine Oil Co., Sample No. 3, 330-N, 200-E, sw cor ne¼ nw ¼ 7-17-13.

OKLAHOMA

BECKHAN COUNTY—Carson et al, Dr. Denby 1, swc se ne, 20-8n-22w.

CARTER COUNTY—Magnolia Pet. Co., Choens 3, sec sw, 33-1s-3w. J. Pollock 3, nec se se, 14-1s-3w.

CREEK COUNTY—Collins et al, Sapulpa 1, sec ne se, 3-17-11. Wilson Pet. Co., M. Cat 1, sec sw, 31-16-9. C. G. Tibbens, Unallotted 1, c e 1 ne nw, 9-14-10. Sand Springs Home Oil Co., T. Atkins 28, c w 1 nw nw, 4-18n-7e. Pine & Smith, A. H. Tiger 1, swc se, 17-17n-7e. Magnolia Pet. Co., B. Lewis 9, swc sw, 27-17n-7e. Pannie Wattie 2, nec ne, 6-15n-7e. Twin State Oil Co., Barnett 1, nwc ne nw, 15-15n-8e.

GRADY COUNTY—Magnolia Pet. Co., H. E. Smith 8, nwc se ne, 35-5n-8w.

HUGHES COUNTY—Bunte et al, Buchner 1, nec nw, 12-8n-8e. Texas Co., Street 1, nec nw sw, 21-7n-8e.

KAY COUNTY — Ingram & Wilson, J. C. Myer 1, c se nw, 14-27n-1e.

KIOWA COUNTY — Allen Bros., R. W. Howell 1, nwc se, 13-1n-17w.

MUSKOGEE COUNTY—J. R. Graves et al, S. Flowers 5, c se nw, 5-13n-16e. Bement Oil Co., T. Flowers 4, d w 1 sw ne, 5-13w-16e. Lockwood et al, L. Lewis 1, sec se, 31-14n-16e. Davis et al, J. Morris 1, nec nw sw, 20-15n-15e. Grubbs & Young, J. Friday 4, nwc sw nw, 8-15-15e.

OKFUSKEE COUNTY—F. D. Misener et al, Bird 1, nwc ne, 21-10-11. Atlantic Oil Prod. Co., Robinson 2, c w 1 nw sw, 12-10-11. W. L. Umburn, Sullivan 2, swc se se, 1-10-11.

OKLAHOMA COUNTY—I. T. I. O. Co., Community 1, c ne sw, 13-11n-3w.

OKMULGEE COUNTY—Tidal Oil Co., J. Mathews 10, swc se, 24-15-14. J. A. Swindler, C. Lewis 10, c n 1 ne se, 20-15n-14e. Devonian Oil Co., Chamberlain 1-A, swc se, 35-15-12. L. H. Wentz et al, Densen 1, nec sw se, 14-14-12.

OSAGE COUNTY—Winona Oil Co. 25, sec ne se, 28-24-10. Texas Co. 1, nwc se, 22-24-7. Phillips Pet. Co. 1, swc nw ne, 33-25-6. Minnehoma Oil Co. 3, nwc se, 11-26-8.

PAWNEE COUNTY—Rube DeLong et al, Rogers 2, nwc se nw, 11-20-7e.

PONTOTOC COUNTY—American O. & R. Co., Robertson 1, nwc ne sw, 19-5n-5e. Belchie & Laskey, Haney Center 1, w ½ s, 31-5n-7e. Louisiana O. & R. Co., Perry 12, owd nec ne, 19-5n-8e. Westheimer & Daube, Wade 7, nec se sw, 19-5n-8e. Homaokla Oil Co., Shields 9, swc ne ne, 4-4n-8e.

POTTAWATOMIE COUNTY—Westheimer & Daube, Freid 6 ,sec sw nw, 24-7n-4e. Sinclair O. & G. Co., Neeley 4, swc nw sw, 25-7n-4e. Gypsy Oil Co., Dodson 4, swc ne se, 26-7n-4e. Rosenjan 1, nec nw ne, 26-7n-4e. Pure Oil Co., Dodson 2, nwc se se, 26-7n-4e. Tidal Oil Co., Smith 1, nec nw se, 26-7n-4e; Smith 2, sec nw se, 26-7n-4e. Magnolia Pet. Co., Carroll 1, swc nw se, 1-7n-5e. Roxana Pet. Corp., Lowe 1, swc nw ne, 17-6e-5e. Twin State Oil Co., Colin 1,. nec sw, 7-8n-5e. Indep. O. & G. Co., Harding 1, sec nw, 18-8n-5e. Pure Oil Co., Lindley 3, nwc se, 18-8n-5e. Tidal Oil Co. 1, nec sw sw, 18-8n-5e. Darby Pet. Co., Hudson 2, sec ne nw, 19-8n-5e. Pure Oil Co., Urbanskey 1, nwc sw nc, 19-8n-5e. Sinclair O. Co., Bellars 4, swc nw ne, 19-8n-5e.

SEMINOLE COUNTY—Sunray Oil Co., Sarney 2, sec ne nw, 19-5n-5e. Skelly Oil Co., Mayes 4, se ne, 1-9n-5e. Gypsy Oil Co., Mosar 2, nec se ne, 1-8n-5e; Mosar 3, sec sw, ne, 1-8n-5e. Indep. O. & G. Co., Lawson 1, nec se, 1-8n-5e; Lawson 2, sec ne se, 1-8n-5e; Lawson 3, nec se se, 1-8n-5e; Lawson 4, sec se, 1-8n-5e. Shaffer O. & R. Co., Weaver 1, nec ne, 12-8n-5e. Tidal Oil Co., Sally 1, nec se, 12-8n-5e. Twin State Oil Co., Ripley 1, sec ne, 12-8n-5e. I. T. I. O. Co., Cully 1, sec sw ne, 10-8n-5e. Amerada Pet. Corp., Rice 1, swc se se, 5-8n-6e. Rice 2, sec se, 5-8n-6e. Gypsy Oil Co., Mission 2, sec sw, 5-8n-6e; Mission 3, swc se sw, 5-8n-6e; Mission 4, sec sw sw, 5-8n-6e; Barkus 2, swc se sw, 6-8n-6e; Barkus 2, sec sw sw, 6-8n-6e; Barkus 4, swc sw, 6-8n-6e; Barkus 5, nwc sw, 6-8n-6e; Barkus 6, c s 1 n½ sw, 6-8n-6e; Mission 5, sec se, 6-8n-6e; Mission 6, nwc se se, 6-8n-6e; Mission 7, swc ne se, 6-8n-6e. Twin State Oil Co., Judy Center 2, s 1 n½ s, 6-8n-6e. Gypsy Oil Co., S. Barkus 1, sec sw nw, 7-8n-6e; S.Barkus 2, swc nw, 7-8n-6e; B. Doser 2, nwc se ne, 7-8n-6e; B. Doser 3, swc ne ne, 7-8n-6e; B. Doser 4, nec ne, 7-8n-6e; Hardy 1, nec sw ne, 7-8n-6e; Hardy 2, swc ne, 7-8n-6e; Hardy 3, sec nw, 7-8n-6e; Hardy 4, swc se nw, 7-8n-6e; C. Harjo 1, nec se, 7-8n-6e; Harjo 2, sec nw se, 7-8n-6e; C. Harjo 3, nec nw se, 7-8n-6e. Indep. O. & G. Co., Kistler Payne 2, nwc ne nw, 7-8n-6e; Kistler Payne 3, swc ne nw, 7-9n-6e; Kistler Payne 4, sec ne nw, 7-8n-6o. Minnehoma O. Co., Neal 2, nwc nw, 7-8n-6e; Neal 3, swc nw nw, 7-8n-6e; Neal 4, sec nw nw, 7-8n-6e. Roxana Pet. Corp., Maines 2, nec nw sw, 7-8n-6e; Maines 3, sed sw sw, 7-8n-6e. Roxana Pet. Corp. & Marland Oil Co., Herndon 2, sec nw ne, 7-8n-6e. Carter Oil Co., Mecco 2, nec nw nw, 8-8n-6e. Gypsy Oil Co., B. Micco 1, swc nw, 8-8n-6e; B. Micco 2, nwc sw nw, 8-8n-6e; Micco 1, nec nw ne, 8-8n-6e; Micco 2, nwc ne, 8-8n-6e. Twin State Oil Co., Hayes 2, nec ne, 8-8n-6e. Carter Oil Co., Fuswa 2, nec nw nw, 18-8n-6e; M. Harjo 4, sec nw sw, 13-7n-6e. Indep. O. & G. Co., R. Davis 4, nec sw sw, 13-7n-6e. Pure Oil Co., Cotcha 10, sec ne, 23-7n-6e. Carter Oil Co., Larney 4, sec nw nw, 24-7n-6e. Pure Oil Co., Brinson 2, nwc sw, 24-7n-6e.

STEPHENS COUNTY—Snodgrass Oil Co., Malernee 1, swc ne nw, 34-1s-8w.

TULSA COUNTY — Rexaline Pet. Co., Hutching 1-A, swc sw, 27-17-12.

WAGONER COUNTY—Peterson & Young, Mitchell 1, c w 1 nw se, 23-16n-16e. C. W. Gillett, L. McIntosh 6, nec nw nw se, 25-17n-16e.

TEXAS

ARCHER COUNTY—Dr. C. W. Wallace, Wichita Falls, Kemp & Kempner, 2, B. 75, W. V.F.L. sur, 450 ft from n and 150 ft from w line.

ANDERSON COUNTY—Humble Oil & Ref. Co., Houston, A. B. Mandelstam 4, N. K. Ses-

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sna sur, 1705 ft from w and 1160 ft from s line.

ANDREWS COUNTY—Deep Rock Oil Co., Fort Worth, D. J. Hostetter 1, S 20 School Land sur, 330 ft s and 330 ft e of center of lease.

BROWN COUNTY—Woodley Pet. Co. & Young Bros. & Alexander, Cisco, R. Hickman 15, No. 783 T. Benson sur, 306 ft from e and 408 ft from s line. F. N. May, Santa Anna, Whidden 12, S 52, Wm. Irion sur, 151 ft from s and e lines. Hammon, Heyser & Garrett, Wichita Falls, T. B. Starkey 23, S 7 E.T.Ry. sur, 300 ft s of No. 18. United Royalties Corp., Wichita Falls, T. Fitzgerald 1, s 106 P. Johnson sur, 150 ft n of center of s line. Green & United Royalties Corp., Wichita Falls, J. M. Barnes 1, S 105, N. Hawkenburg sur, 150 ft from n and e lines. Woodley Pet. Corp. & Young Bros. & Alexander Inc., Cisco, J. S. Armstrong 6, S 151 P. Curlong sur, 150 ft w and 300 ft n of No. 5; R. Hickman 16, No. 783 T. Benson sur, 638 ft from w and 408 ft from s line. Barnsdall Oil Co., Tulsa, S. Debusk 1, J. L. Williams No. 146 sur, 2690 ft from w and 1530 ft from s line. C. C. Outhier et al, Brownwood, C. N. Anderson 1A, No. 282 S. Jones sur, 150 ft from w and 220 ft from n line. Humble Oil & Ref. Co., Cisco, R. Hickman 26, T. Benson sur, 919 ft e and 456 ft s of No. 25; J. H. Allen A 6, No. 241 J. Delgado sur, 200 ft n and 400 ft w of No. 8. Lloyd Oil Corp., Fort Worth, J. R. Collier 9, S 139 W. A. Smith sur, 150 ft n and 300 ft e of No. 8. Root & Rhodes, Eastland, A. K. White 1, S 603 A. K. White sur, 150 ft from s and w lines. J. A. Bartles, Brownwood, W. B. Tongate 1, W. G. Gooseley sur, 330 ft n and 330 ft w of center. Pandem Oil Corp., Wichita Falls, I. C. Mullins 1, S 32 J. W. B. Allen sur, 150 ft from s and w lines.

BREWSTER COUNTY—E. W. Bateman, Fort Worth, Revill 1, B 5B, G.H.&S.A. & A.B. &M. sur.

CALLAHAN COUNTY—Texas Co., Wichita Falls, P. G. Hatchett 4, S 9 D.&D. Asy. sur, 180 ft from n and 150 ft from w line. R. O. & B. K. Eubank, Cross Plains, Fee 2, B 48 C.C.S. L. No. 181 sur, 150 ft from w and 450 ft from s line. Moutray Oil Co., Abilene, J. M. Flores 25, S 149 B.B.B.&C. sur, 1324 ft from n and 30 ft from e line. Reiter-Foster Oil Corp., Woodson, P. G. Hatchett 2, S 24 D.&D. Asy. sur, 150 ft from s and 900 ft from w line. W. D. Kynerd, Dallas, J. C. McDermitt 5, B 46, C. C.S.L. sur, 150 ft from e and 450 ft from s line. E. F. Stratton, Pioneer, S. J. Smith 1, No. 181, B 71 sur, 150 ft from s and e lines. Sircovich & Thomas, Houston, G. C. Wood 14, 2299 T.E.&L. sur, 30 ft n of No. 9; No. 15, 100 ft s of No. 6. Texas Co., Wichita Falls, J. T. Davis 28, S 4 Bayland Asy. sur, 145 ft s of No. 19. E. N. Schaffner et al, Cross Plains, H. Derrington 2, W. G. Anderson sur, 300 ft n of No. 1. Cranfill & Reynolds, Box 607, Cisco, R. F. Scott 1, S 315 S.P.Ry. sur, 750 ft from n and 1750 ft from w line.

COLEMAN COUNTY—States Oil Corp., Eastland, E. P. Watson 5, S 163 Wm. Mason sur, 500 ft from s and e lines. The Texas Co., Wichita Falls, T. M. Hays 2, S 93 Bond Sanders sur, 400 w of No. 1. Texas Prod. Co., Shreveport, La., J. R. Foster 1, No. 701 J. M. Barkley sur, 150 ft from s and e lines. Byrd & Golston, Brownwood, W. L. Moody 3, J. Scott sur, 150 ft from n and 330 ft from e line. D. H. Byrd et al, Brownwood, R. C. Gay, No. 630 M. A. Fisk sur, 150 ft from n and e lines. A. L. Derby, Wichita, Kan., L. P. Jennings 9, A. S. Lipscomb sur, 534 ft from n and 550 ft from e line. A. R. Forster et al, Coleman, C. L. Davenport 4, W. T. Dunlavy sur, 150 ft from n and 450 ft from e line.

CALDWELL COUNTY—C. E. Lange, San Antonio, Kate Colding 1, A. Floyd sur, 150 ft from nw and 112 ft from ne line. M. K. Towns, Luling, W. F. Davis 1, G. Hinds sur, 150 ft from n and w lines. J. S. Abercrombie Co., Houston, E. I. Moses 1, G. Hinds sur, 350 ft from n and w lines. Lu-Tex Oil Co., Los Angeles, Calif., W. F. Davis 2, A. Floyd sur, 150 ft e and 492 ft s of No. 3. Jarmon & Owens, San Antonio, Lytton Springs Park Assn. 1, P. Martinez sur, 150 ft from s and w lines. Lonnie Glasscock, Big Spprings, L. A. Cardwell 1, P. Martinez sur, 150 ft from n and e lines; L. A. Cardwell 1, P. Martinez sur, 150 ft from ne and 175 ft from nw line. Hadley Oil Co., San Antonio, A. B. Tiller 1, G. Hinds sur, 150 ft from n and w lines.

CHAMBERS COUNTY—Mills Bennett Prod. Co., Houston, Kirby Pet. Co. 2, H. Griffith sur, 1260 ft from w and 50 ft from s lines. Yount-Lee Oil Co., Beaumont, Chambers County Agricultural Co. 1, Bloodgood sur, 1760 ft from n and 2500 ft from w line; Richardson 1, Bloodgood sur, 165 ft from n and 290 ft from w line.

CARSON COUNTY—Skelly Oil Co., Tulsa, Okla., H. Schafer 10, S 198 B3 I.&G.N. sur, 1320 ft from w and 330 ft from s line.

COLORADO COUNTY—The Texas Co., Houston, C. P. Hays 1, P. Reels sur, 150 ft from n and 348 ft from e line.

DUVAL COUNTY—The Texas Co., Houston, C. W. Hahl 1, No. 250 R. Gunter sur, 150 ft from n and w lines.

EASTLAND COUNTY—Root & Fehl, Eastland, J. W. Noble 2, S 25 B 3 H.&T.C. sur, 900 ft from e and 325 ft from n line. Texas Pacific Coal & Oil Co., Ranger, Fee 2, R.C.S.L. sur, 125 ft e of No. 1. Cranfill & Reynolds, Cisco, J. Stafford 1, J. Syfrett sur, 150 ft from n and 1470 ft from w line. Texas Pacific Coal & Oil Co., Ranger, C. E. Allen B 1, J. H. Price sur, 200 ft s of center of n line. A. Bint, Dothan, Texas, Fee 2, S 4 B.B.B.&C. sur, 300 ft n of No. 1.

FORT BEND COUNTY—Moody Corp., Houston, B. M. West 3, T. Hobermacker sur, 675 ft from n and 75 ft from e line. Cullen, West & Pillot, Houston, H. J. Hartfield 1, S 25 H.&T.C. sur, 400 ft from s and w lines. Navarro Oil Co., Houston, E. R. Robinson 1, B 23 H Shropshire sur, 50 ft from n and w lines.

GRAY COUNTY—Gulf Prod. Co., Fort Worth, G. H. Saunders 1, S 3 B 1 A.C.H.&B. sur, 330 ft from w and 990 ft from s line. Skelly Oil Co., Tulsa, Okla., G. H. Saunders 1, S 4 B 1 A.C.H.&B. sur, 330 ft from e and 990 ft from s line; No. 2, 330 ft from s and w lines; No. 3, 330 ft from n and 990 ft from w line; No. 4, 330 ft from n and 990 ft from e line. The Texas Co., Wichita Falls, A. Chapman B1, S 50 B A9 H.&G.N. sur, 330 ft from n and 990 ft from w line. Get Oil Co. of Texas, Amarillo, S. T. Goldberg 1, B 5 T.L.P.E. sur. McIlroy Oil Co. Inc., Amarillo, B. Bull 2, S 3 B 2 H. &G.N. sur, 150 ft from n and 240 ft from w line.

GONZALES COUNTY—The Texas Co., Houston, M. Thornton 1, A. Zumwalt sur, 719 ft from ne and 153 ft from nw line. Jos. Bruner, Luling, R. D. Miller 1, Heath & Kent, 3040 ft from n and 200 ft from e line.

GAINES COUNTY—Pure Oil Co., Mexia, A.

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UNITED STATES DEPARTMENT OF THE INTERIOR

OFFICE OF THE SECRETARY WASHINGTON

Call for Bids to Purchase Government Royalty Oil from Salt Creek Field, Wyoming

The Secretary of the Interior invites sealed bids to be submitted at his office, Interior Department Building, Washington, D. C., on or before noon of December 10, 1928, for the royalty oil accruing to the United States from leases on Government land within the Salt Creek Oil field in the State of Wyoming, for a period of three (3) years beginning January 1, 1929. For the calendar year 1927 the total Government royalty oil from the Salt Creek field amounted to approximately 1,920,000 barrels, and for the period from January 1 to August 31, 1928, to approximately 1,280,000 barrels, the average gravity in both years being in the range from 36.0 to 36.9 degrees A. P. I.

Bids must be based upon the highest posted field price for oil of like gravity in Oklahoma and Kansas, and or in Wyoming, whichever is the higher, and must be stated as a differential in cents per barrel from such posted price. Delivery of royalty oil will be made on each leasehold for the account of the successful bidder. Payments for the royalty oil are to be made to the Register of the United States Land Office at Cheyenne, Wyoming, on or before the fifteenth (15th) day of each month following that in which delivery is made and shall be computed on the basis of tank measurement with two (2) per cent strapping in terms of standard barrels at sixty (60) degrees Fahrenheit.

The successful bidder will be required to furnish a corporate surety bond in the sum of $250,000 conditioned upon full and complete compliance with the terms of the contract.

The Secretary of the Interior may accept any bid which in his judgment is most advantageous to the Government, and reserves the right to reject any or all bids.

Sealed bids are to be submitted to the Secretary, Department of the Interior, Washington, D. C., the envelope to be marked plainly, "Bid on Salt Creek royalty oil." No bid received after the time herein fixed for submitting bids will be considered.

Additional information can be obtained from the Geological Survey, Department of the Interior, Washington, D. C., or from the field offices of the Geological Survey at Casper, Wyoming.

ROY O. WEST, *Secretary of the Interior.*

October 30, 1928.

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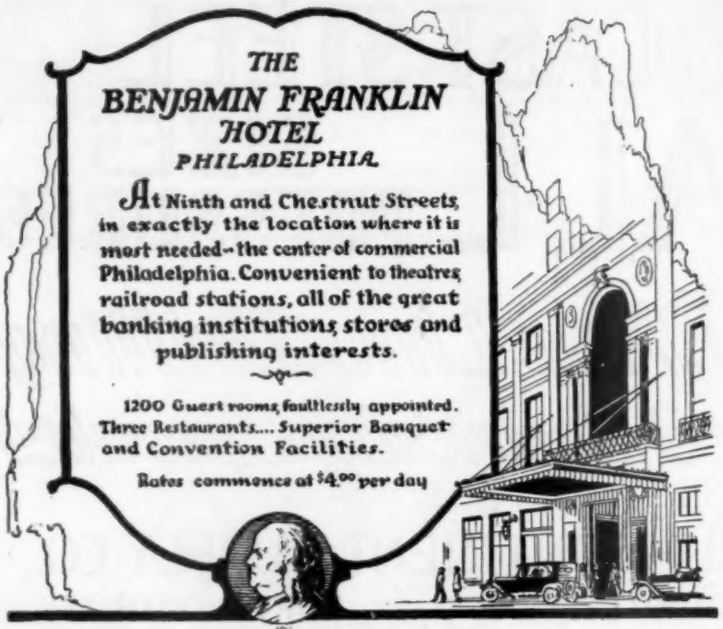

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A. Williamson 1, S 110 B H.C.&W. sur, 1650 ft from n and 330 ft form e line.

HOWARD COUNTY—Louisiana Oil Ref. Corp., Shreveport, La., Settles 3, S 6 B 32 T.& P. sur, north central part of lease. F. H. E. & Moody Corp., Sherman, D. Roberts D6, S 136 B 29 W.&N.W. sur, 330 ft from s and e lines. Ward Oil Corp., Ardmore, Okla., D. Roberts 4, S 137 B 29, W.&N.W. sur, 330 ft from n and e lines. Group I Oil Corp., & Maryland Oil Corp., Fort Worth, W. R. Settles 6A, S 6 N 32 T.&P. sur, ne corner. F. H. E. & Moody Corp., Sherman, D. Roberts B8, S 137 B 29 W.&N.W. sur, 50 ft s of No.3. Marland Oil Corp., Fort Worth, H. R. Clay A11, S 139 B 29, W.&N.W. sur, 250 ft from s and e lines.

HARRIS COUNTY—Moody Corp., Houston, K. F. Whitehead 3B, B 14 J. Hamilton sur, 1950 ft from n and 25 ft from e line. Rio Bravo Oil Co., Houston, J. J. Settegast PSA 11, J. Koppman sur, 650 ft from n and 350 ft from e line; J. J. Settegast B10, J. Kopman sur, 100 ft sw and 350 ft n of No. B7.

HUTCHINSON COUNTY—Dunigan Bros., Pampa, O. W. Lugenbyhl 1, T.W.&N.G. Ry. sur, 300 ft from s and e lines.

HARDIN COUNTY—Ada Belle Oil Co., Batson, Wm. Weiss 123, F. H. Green sur, 360 ft from e and 30 ft from n line.

JACK COUNTY—Buttram Pet. Corp., Oklahoma City, Okla., Jones Est. 10, No. 5 S.P.Ry. sur.

JASPER COUNTY—Mark Kleedon, Wichita Falls, N. Mills 1, B.B.B.&C. sur, 150 ft from n and e lines. L. A. Painter, St. Louis, Mo., Rush 1, Jefferson County; Great Lakes 1, R. Boykin sur, 200 ft e of center of w line.

JEFFERSON COUNTY—L. A. Painter, St. Louis, Mo., Ewing & Ring 1, B 102, J. A. Veatch sur, 30 ft from n and e lines; No. 2, 120 ft se of No. 1; Rush 1, B 102 J. A. Veatch sur, center; Gordon 1, B 12 J. A. Veatch sur, 35 ft from n and w lines. River Oil Corp., Beaumont, Ship Channel Land Co. 1, B 2 D. Brown sur, 1150 ft from e and 750 ft from s line.

LIBERTY COUNTY—Sun Oil Co., Beaumont, A. Mitchell 10, M. G. White sur, 100 ft from w & 50 ft from s line; A. Mitchell 11, 80 ft from n & 40 ft from w line.

LOVING COUNTY—Delaware Oil Corp., El Paso, Ramsey 1, S 79, B 1, W.&N.W. sur, 1650 ft from sw & 2310 ft from se line.

MONTAGUE COUNTY—Pure Oil Co., Fort Worth, L. Keck A 8, Wm. Donoho sur, 650 ft from w & 2310 ft from s line. Bridwell Oil Co., Wichita Falls, M. H. Salmon 7, F. Robertson sur, 875 ft from n and 825 ft from w line. C. H. Howard B 1, Robertson & Chambliss sur, 1320 ft from n and 450 ft from e line.

MATAGORDA COUNTY — Hamill Drilling Co., Bay City, Meyers 1, B 6, Wm. Hadden sur, 200 ft from n and 60 ft from w line.

MEDINA COUNTY—United North & South Dev. Co., San Antonio, C. Nehr 1, No. 441, D. G. Burnett sur, 150 ft s and 7479 ft from e line.

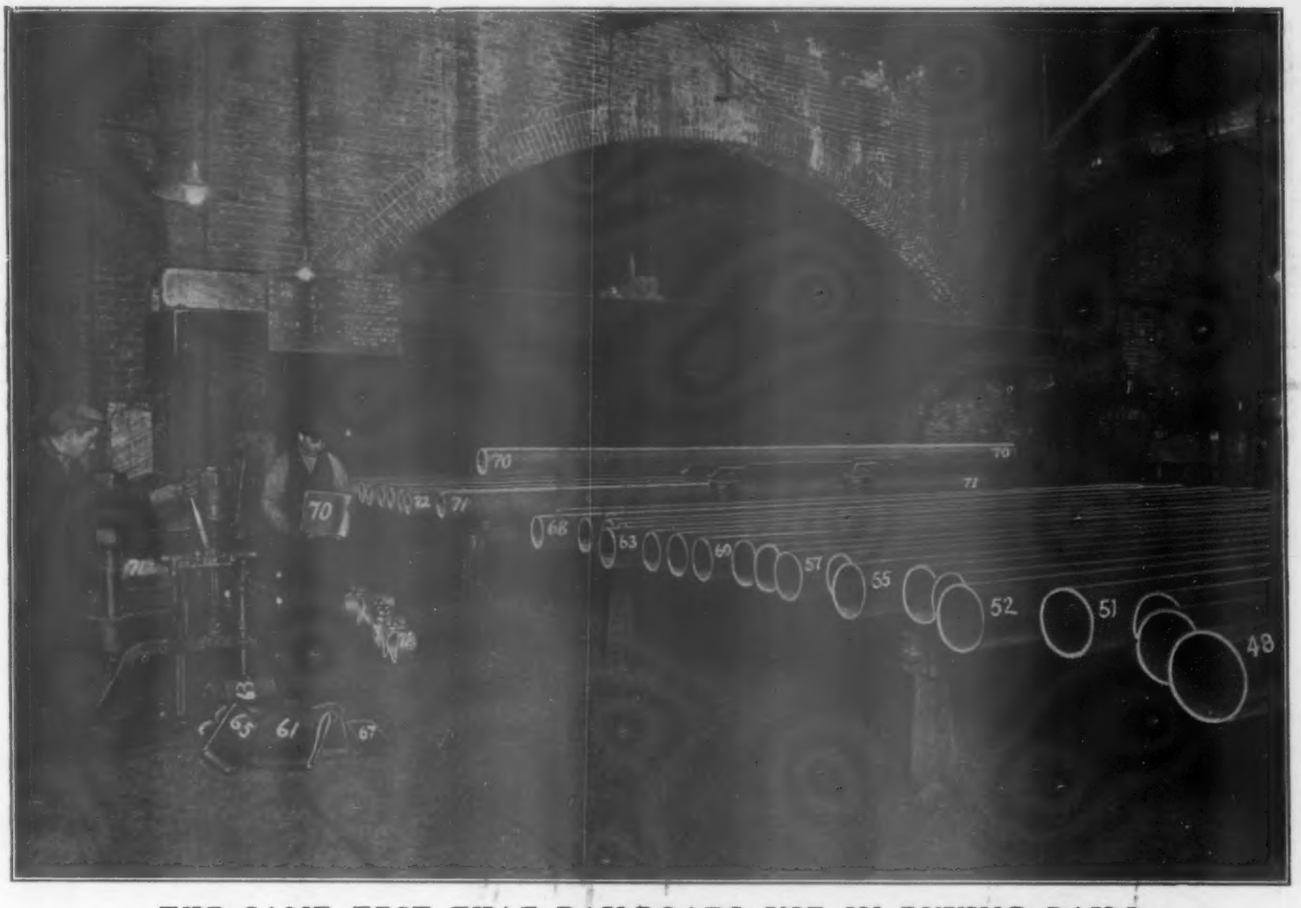
MADISON COUNTY—Wm. W. Guelph, Normangee, W. H. Hibbitt 2, S 19, J. Woodruff sur, 50 ft e of No. 1.

NUECES COUNTY—Saxet Gas Co., Corpus Christi, Weil 4, 848 ft from w and 752 ft from n line.

PALO PINTO COUNTY—J. C. Von Arx, Fort Worth, M. J. Jordan 1, S 1745, T.E.&L. sur, 936 ft from w and 500 ft from s line. Texas Pacific Coal & Oil Co., Ranger, F. V. Robinson B 1, S 56, B 3, T.&P. sur, 1320 ft s and w lines.

PECOS COUNTY—Rio Pecos Oil Co., San Angelo, Yates A1, S 543, H.&G.N. sur, 330 ft from n and w lines. Gulf Prod. o., Fort Worth, M. A. Smith 13, S 22, B 194, G.C.&S.F. sur, 990 ft from n and 1136 ft from e line.

SHACKELFORD COUNTY—Scott & Walker, Albany, L. C. Huskey 3, 568, T.E.&L. sur, 300 ft s of No. 1. A. Crosby, Albany, J. T. Cockrell 3, S 6, Bayland Asy, sur, 570 ft from e and 200 ft from s line. T. G. Shaw, Fort Worth, R. L. Broadfoot 9, S 29, Bayland Asy. sur, 172 ft ne of No. 5; W. C. Owens 14, S 20, Bayland Asy. sur, 180 ft sw of No. 4; J. Rice 10, S 20, Bayland Asy. sur, 400 ft ne of No. 6; J. Rice 11, 300 ft n of No. 10; J. Rice 17, 310



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ft se of No. 1; J. Rice 16, 355 ft ne of No. 1; J. Rice 18, 300 ft se of No. 2. Dickey Oil Co., Cisco, E. G. Schkade 1, 570, T.F.&L. sur, 150 ft from s and w lines. Tannehill, Kiser & Fleming, Albany, J. B. Matthews 4, S 27, E. T. Ry. sur, 325 ft n of No. 1. The Texas Co., Wichita Falls, J. F. Sedwick 6, S 1, E. T. Ry. sur, 575 ft from w and 1353 ft from s line. Sam Letwin, Breckenridge, N. J. Douglas 1, 385, T.E.&L. sur, 799 ft from ne and 774 ft from se line; N. J. Douglas 2, 560 ft from ne and 624 ft from se line; N. J. Douglas 3, 600 ft from se line and 300 ft s of No. ; N. J. Douglas 4, 325 ft s of No. 2. A. Crosby, Albany, J. T. Cockrell 4, S 6, L.A.L. sur, 200 ft from e and 350 ft from s line. A. C. Walker, Albany, L. C. Huskey 9, 529, T.E.&L. sur, 300 ft w of No. 6. T. G. Shaw, Fort Worth, J. Rice 12, S 20, Bayland Asy. sur, 300 ft s of No. 13; J. Rice 13, 300 ft s of No. 14; J. Rice 14, 300 ft s of No. 15; J. Rice 15, nw corner. Cross Cut Corp., Fort Worth, C. F. Brown 3, S 67, L.A.L. sur, 300 ft w of No. 1.

STARR COUNTY—The Texas Co., Houston, V. Guerra 2A, 150 ft from s and 1000 ft from e line.

SUTTON COUNTY—Phillips Pet. Corp., Bartlesville, Okla., B. H. Cusenbary 1, S 39, C.C.S.D.&R.G.N.G. sur, 330 ft from n and e lines.

SAN PATRICIO COUNTY—Saxet Gas Co., Corpus Christi, Whiet Point Dev. 3, 1600 ft from n and 1844 ft from e line.

STEPHENS COUNTY — W. N. Baldwin, Graham, W. Jackson 1, S 44, B 6, T.&P. sur, 250 ft from w and 350 ft from s line.

WICHITA COUNTY—Magnolia Pet. Co., Dallas, S. S. C. George 3, L. B. Talliferro sur, 150 ft from s and e lines. Bridwell Oil Co., Wichita Falls, T. L. Burnett 3, S 3, H.T.&B. sur, 1077 ft from w and 1067 ft from n line. Panhandle Ref. Co., Wichita Falls, J. & J. Waggoner 10, S 2, G.C.&S.F. sur, 965 ft from w and 1117 ft from n line. W. B. Omohundro, Waggoner Bldg., Wichita Falls, J. R. Pace 19, R. J. Scott sur, 750 ft from w and 475 ft from s line. Ryan Consolidated Pet. Corp., Bartlesville, Okla., G. Nance 100, S. O. Fowler sur, 450 ft from n and 1059 ft from e line. R. A. Laning et al, City Nat. Bank Bldg., Wichita Falls, McCarty 6, S. O. Fowler sur, 300 ft n of No. 4. W. H. Hammon, Wichita Falls, S. H. McCarty 12, S. O. Fowler sur, North central part of lease. Culbertson Co., City Nat. Bank Bldg., Wichita Falls, J. & J. Waggoner 56, S 13, B.S.&F. sur, 350 ft s of No. 20. Thornton Lomax Hr. & Texas Co., Wichita Falls, W. H. Chilson 1, S 6, B 4, D.C.S.L. sur, 766 ft from e and 868 ft from s line. O. T. Ailes, Wichita Falls, T. W. Robertson 7F, S 20, H.&G.N. sur, 300 ft n of No. 5. Swanner & Williams, Wichita Falls, Williams-Parker 1, P.P.C.S.L. sur, 960 ft from n and 1170 ft from w line. Holbrook & Woods, Wichita Falls, Kemp & Kempner 24, B 82, W.V.F.L. sur, 300 ft s of No. 23. United Prod. Co., Wichita Falls, W. L. Hodges 3, H.T.&B. sur, 300 ft w of No. 2. Hammon, Heyser & Garrett, Wichita Falls, S. H. McCarty 10, S. O. Fowler sur, 50 ft w of No. 8. Magnolia Pet. Co., Dallas, L. Pace 5, R. J. Scott sur. Consolidated Oil Co., Wichita Falls, H. Mitchell 1, C. T. Ry. sur, se corner.

WILBARGER COUNTY—Lowry Oil Corp., Wichita Falls, Harrold 8, S 25, B 13, H.&T.C. sur, 800 ft from s and 150 ft from w line. W. T. Knight, Wichita Falls, W. T. Waggoner 1, S 33, B 6, H.&T.C. sur, 2640 ft from n and 150 ft from e line. Prairie Oil & Gas Co., Ranger, Waggoner A 1, No. 45, B 4, H.&T.C. sur, 1400 ft from sw and 940 ft from se line J. B. Baker Hr. et al, Wichita Falls, W. T. Waggoner 8B, T. D. Purnell sur, 1115 ft from n and 1100 ft from w line. Fain-McGaha Oil Corp., Waggoner Corp., Wichita Falls, W. T. Waggoner 20, S 24, B 4, H.&T.C. sur, 300 ft w of No. 19.

WISE COUNTY—W. M. Moore, Wichita Falls, H. L. Ward 1, C. L. Clason sur, 150 ft from n and w lines.

WILLIAMSON COUNTY — Kuykendall & Power, Taylor, C. Mager 1, Wm. Beyerly sur, 968 ft from n and 845 ft from e line.

WINKLER COUNTY — Dixie & Southern Crude Oil Pur. Co., Shreveport, La., I. Hendrick J3, S 30, B B5, 990 ft from E and 2260 ft from S line. Pure Oil Co., Mexia, T. G. Hendrick C 160, 13, S 45, B 26, School sur, 990 ft sw and 330 ft from se line.

WEBB COUNTY—Houston Oil Co., Houston, R. Benavides D15, B 12, No. 753, 160 ft from w and 662 ft from s line.

YOUNG COUNTY—Allday Oil Corp., Wichita Falls, C. W. Johnson C 3, B 8, E. W. Sergeant sur, 698 ft from w and 80 ft from s line. Shappell Oil Co., Wichita Falls, D. Garrett 5, 1487, T.E.&L. sur, 300 ft n of No. 4. Crude Prod. Corp., Wichita Falls, R. O. Prideaux 9, A. Rohus sur, west of No. 6.

LOUISIANA

ACADIA PARISH — Cranfill & Reynolds, Cisco, Texas, Donnelly et al's 1, 45, 9s, 2w, 1100 ft n and 62 ft w of se cor of sec.

CALCASIEU PARISH—Drysdale-Savoie Oil Co., Lake Charles, J. R. Hill 4, 28, 9s, 11w, 365 ft n and 282 ft e of sw cor of nw¼ of nw¼.

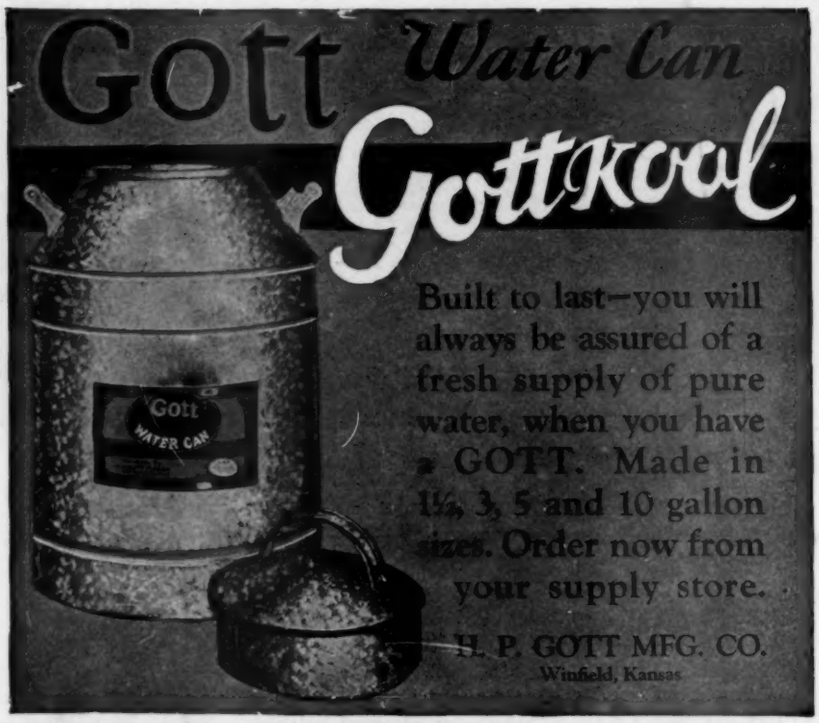
CAMERON PARISH—Calcasieu Oil Co., Inc., Magnolia Pet. Co. and Union Sulphur Co., Valery 4, 36, 12s, 10w, 1916 ft w and 726 ft s of se cor of Sec. 13 in Sec. 36; Watkins 12, 24, 12s, 10w, 2990 ft w and 1280 ft s of se cor. of Sec. 13 in Sec. 24.. Roxana Petroleum Corp., Houston, Texas, Mrs. J. B. Watkins 5, 8, 12s, 12w, 873 ft e and 1294 ft s of nw cor of sec. Shallow Oil Co., Inc., Vinton, La., Francis Lacy 1,, 22, 12s, 10w, 842 ft n and 50 ft e of sw cor of sec. Yount-Lee Oil Co., Beaumont, Texas, State Land 22, 36, 12s, 10w, 920 ft w and 433 ft n of sw cor of Sec. 36-12s-10w in Kelso Bayou.

JEFFERSON DAVIS PARISH—Vacuum Oil Company, Houston, Texas, J. W. DeVilbiss 1, 14, 9s, 4w, 1900 ft s and 2000 ft w of ne cor of sec.

OUACHITA PARISH—Arkansas Nat. Gas Corp., Shreveport, John J. Potts 1, 30, 19n, 4e, 1320 ft s and 620 ft w of ne cor of Lot 1 in nw¼ of sec.

RICHLAND PARISH—Community Oil & Gas Products Co., Monroe, La., S. E. Boies 1, 33, 16n, 6e, 3366 ft e and 1980 ft n of sw cor of nw¼. *Amended permit.

UNION PARISH—J. E. Camattee, et al, Farmerville, La., Tugwell 2, 21, 22n, 1e, 760 ft s and 600 ft w of ne cor of ne¼ of nw¼.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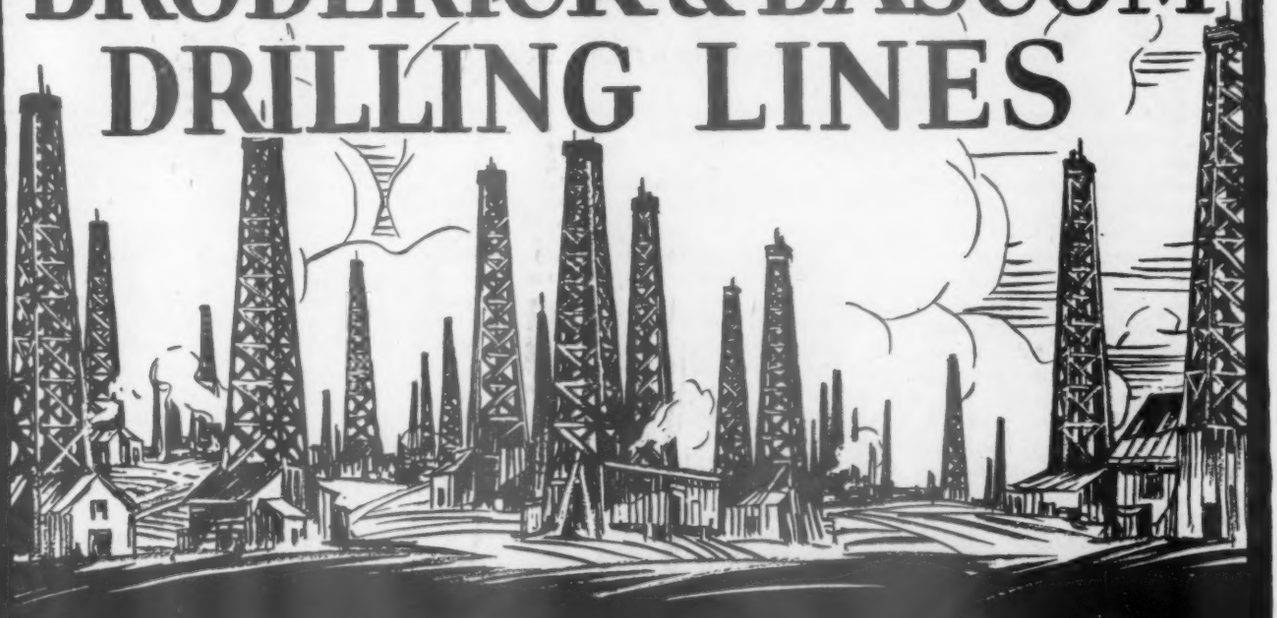

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Installation and Maintenance of Oil-Field Compressors

By H. L. KAUFFMAN

GENERALLY speaking, the air or gas compressors used in oil well pumping are small, yet flexible, multiple-unit plants. Compressors of this general type find preference (1) because of transportation difficulties and (2) because fields often are not sufficiently permanent to justify installation of larger units.

In laying-out a compressor plant, ample space should be provided for inspecting, cleaning and repairing the compressor.

As to foundations: while concrete is preferable, it is costly for a semi-permanent plant; therefore, a combination of wooden sills and fabricated steel will usually make a suitable base, though heavy timbers alone have often proved satisfactory. The sub-base should be so designed as to keep the compressor low, at which point vibration will be at a mimimum.

If the compressor units use radiators for cooling, the fans must not be in line. The radiators should face the wall and, if possible, a window.

To reduce to a minimum danger of injury to workmen from an explosion, air receivers should *always* be located outside the building—with a safety valve placed in the discharge piping between the compressor and the first valve. As a further precaution against fire, the discharge opening of all safety valves should be connected with a pipe of reduced diameter that should be led at least a hundred feet from the building.

Where the air-lift principle is being utilized, the air-intake of the compressor should *always* be piped to the outside of the building, using a pipe as large and with as few elbows as possible. Outside air is cleaner and cooler than that within the building, and the large straight pipe permits its ready entrance.

In high-pressure service separate water systems should be installed for each of the cylinder heads and the inter-cooler. It is also good practice to place funnels on the discharge water lines; for, by so doing, it is easier to inspect the water flow.

In determining the size of pipe to be used in a compressor system keep in mind, if the use of heavy or extra heavy iron or steel piping seems advisable in order to meet pressure conditions, that the extra thickness of such pipe is secured by the reduction of the internal diameter; therefore, to obtain a sufficient area for the flow of air or gas, pipe of larger diameter may be required than at first thought would appear necessary.

In order to obtain maximum efficiency from a compressor system, everything possible should be done to keep friction at a minimum. One of the means by which this can be accomplished is by eliminating sharp bends in the piping, thereby reducing friction between the compressor and the main discharge.

Compressor Care

In adjusting the plate valve of the compressor, the center jack-bolt should be tightened firmly down onto the valve but —and note this especially—*not forcefully*. This bolt must withstand only slight variations in differential pressures. At this point it well might be mentioned that, in the case of the discharge valve, the pressure is usually working *with* the center jack-bolt. Too much pressure from the bolt inevitably will warp the valve in its seat. If a slight leak develops under the discharge valve cover, it can be remedied by tightening the gasket with the retain ing studs. However, be sure to relieve the center jack-bolt before starting to tighten; otherwise, the valve will receive the same damaging pressure as though the bolt itself had been tightened.

Inspection at regular intervals will add to the efficiency of compressors used in oil-well pumping. Such inspections will keep the operator advised as to when bearing and stuffing boxes need adjustment. Remember, though, that bearings and stuffing boxes should not be forcefully tightened at any time; also, that in cold weather the inter-cooler and cylinder jackets may require draining. In case of a shut-down for any considerable length of time, the stuffing-box packing should be removed in order to prevent rusting of the rods. Having on hand at all times such essential spare parts as are apt to become worn most readily will make possible continuous operation of a compressor.

Because of the high compression under which compressors operate, a carbon deposit will always form in the cylinders and around the discharge valves. To eliminate the possibility of an explosian, *never use kerosene or a lubricating oil of low flash-point to wash out this deposit*: instead, use warm soap suds which can be pumped into the cylinders either by means of a hand pump or by the regular force-feed lubricator adjusted so that it operates at about 10 times normal speed. Such suds should be used a few hours each week in place of oil. After using soap suds, the drain cock of the receiver and intercooler should be opened in order to draw off any accumulated liquid. Oil should be used again for about a half hour before shutting down the compressor, so as to prevent rusting of the cylinders and their fittings.

Acknowledgment. For much information used in the preparation of this article, the writer wishes to acknowledge his indebtedness to Ingersoll-Rand Company.

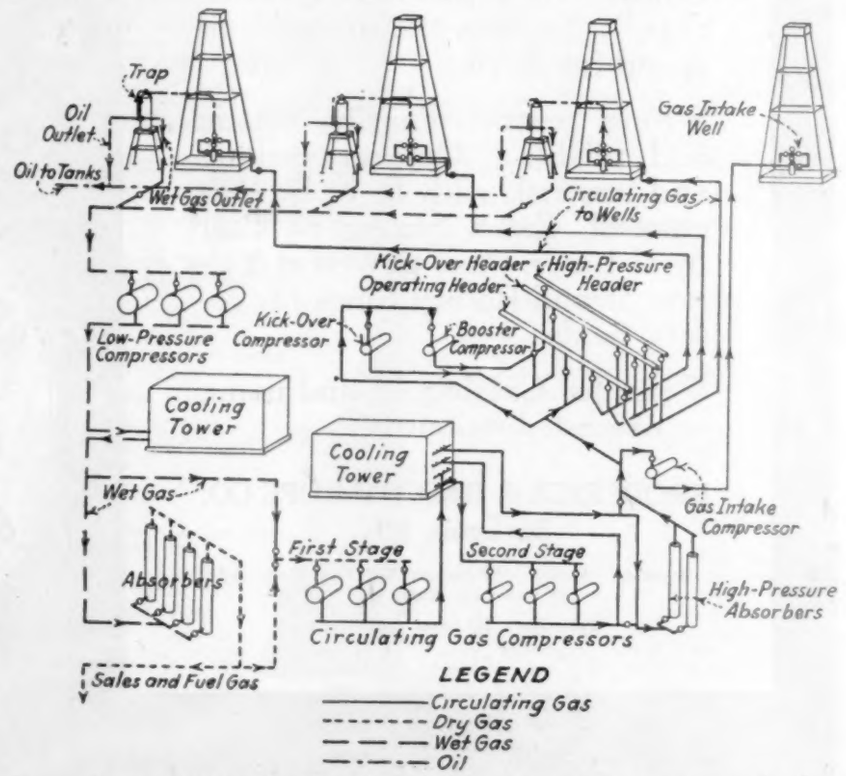

Figure 1—Flow sheet of gas-lift system, showing where compressors are used. (Courtesy A. I. M. M. E., from paper by R. D. Gibbs and C. C. Taylor.)

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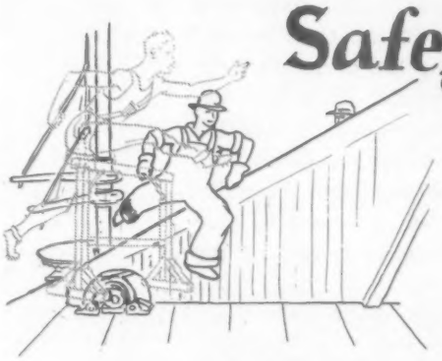

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EMSCO STEEL EQUIPPED WELLS ARE SAFE

The Exposition a Complete Success

By GRADY TRIPLETT

SELDOM does an event of its nature please as did the Fifth International Petroleum Exposition and Congress. When the gates closed October 29 the word satisfaction might well have been written for the whole affair.

When several hundred manufacturers set up their equipment for a display, it is too much to expect the meeting to be void of complaint. But none was heard during the ten days of the affair that came to be styled the World's Fair of the Oil Industry.

Many factors contributed to the success of the recent Exposition. But without thorough planning and adequate facilities, the remaining favorable factors could not have brought the success that resulted. The management deserves the highest of praise for the manner in which the Exposition was conducted.

The first consideration of the International Petroleum Exposition is the exhibitors. When manufacturers spend more than $1,000,000 to place their products before an industry, the manufacturers deserve every consideration. In the Exposition just closed, the manufacturers of equipment for the petroleum industry had this consideration to such a satisfactory extent that none had reason to give complaint.

After providing the proper plant for displaying equipment, the Exposition management contributed its next most important condition in the right sort of attendance. Publicity was so shaped, both prior and during the event, that the proper class of individuals entered the turnstiles. These people came in a desirable manner. The Exposition was never crowded. But day after day the men of the oil fields came in adequate numbers. They came from every oil state and many foreign countries. They filled the isles of the buildings and the walks of the outside court. These men were present in sufficient numbers to give them opportunity to witness the equipment and to give representatives of the manufacturers opportunity of properly presenting their wares.

It is impossible to determine just how much equipment was sold at the Fifth International Petroleum Exposition. But it is safe to set down that more was sold than at any previous Exposition.

Attendance was responsible for these sales. The management succeeded in bringing the proper class of men and women to the Exposition and in desirable numbers. With that the undesirable class was not sufficient to cause trouble. The Exposition had nothing of a carnival nature inside the grounds. Consequently those of the carnival spirit were not present.

It is certain that there will be future International Petroleum Expositions in Tulsa. Future ones should be more successful than the one just closed. The International Petroleum Exposition and Congress must grow. As it grows, it must of necessity change.

A word of warning is permissable in regard to this change. The recent Exposition has set a model. The management will be justified in clinging closely to the model that has been set. Growth and change are essential. With growth and change there must be satisfaction. The fifth Exposition points the way to success, for it was satisfactory.

Representatives of Foreign Oil Producing Countries Visit Exposition

In his final report on the success of the Fifth Annual Petroleum Exposition at Tulsa, General Manager Burr Gibbons suggests to the board of directors that effort be made to procure still greater participation in the event from foreign fields. At the show just closed there were 70 visitors representing 21 foreign countries. The picture was taken when the foreign visitors were gathered for a luncheon given in their honor during the exposition.

Old Timers Given Special Honors and Organize "Pioneers of the Oil Industry"

Visitors at the Fifth Annual Petroleum Exposition at Tulsa turned aside from glorying in the achievement of the present day, as revealed in the exhibits of modern machinery of the business, long enough to do proper honor to the old men who pioneered in oil. The old timers had a real get-together and organized themselves in a permanent organization, "Pioneers of the Oil Industry."

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Much Leasing Around Oklahoma City

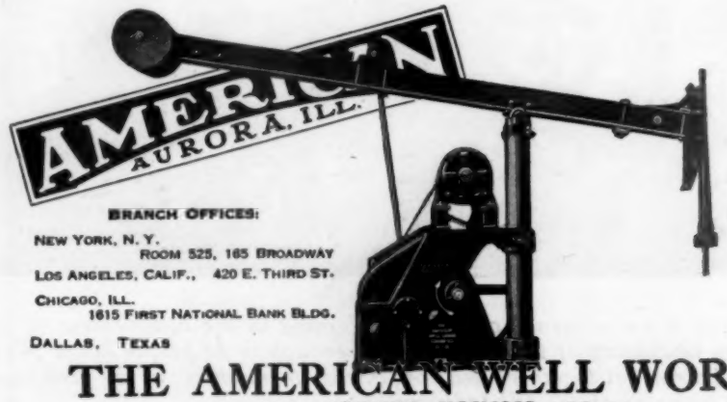
Oklahoma City.—Sinclair Oil & Gas Company, holder of lease on considerable likely productive acreage in the neighborhood of Indian Territory Illuminating Oil Company's gas discovery six miles south of Oklahoma City, secured a lease on a 160-acre block of school land, the southeast quarter of Section 36-11-3w, slightly more than a mile south of the discovery, for $24,000 October 30. Approval of the lease sale on oil and gas rights was made by the school commissioners.

Approval was also made by the commissioners of a deal whereby Magnolia Petroleum Company took a lease on the southeast quarter of Section 13-1s-9w, Stephens County, for $320 provided the lessors start a well within 90 days.

Sale of oil and gas lease on another piece of school land was approved, to O. M. Wallace, independent operator of Wichita, Kansas, on the northeast quarter of Section 33-2n-9w, Comanche County, for $336.

Lease of oil and gas rights on the major portion of privately owned land within a radius of 20 miles of the I. T. I. O. gas discovery, CSE SE Section 24-11-3w, Oklahoma County, has been taken during the buying campaign of the past three months following the striking of the first big gas in the Tonkawa series.

Ponca City, Okla.—The L. W. Prunty Drilling Company, contracting concern active in Oklahoma, Kansas and Colorado, has recently acquired the old E. W. Marland and Earl Smith Drilling Company, which was organized to drill wells in Kay County, in 1916, and which has since operated as one of the leading drilling concerns in Northern Oklahoma under the ownership of R. L. Robinson and the Kay Oil & Gas Company. The Prunty Drilling Company is owned by L. W. Prunty, a veteran drilling contractor in both United States and foreign fields, and R. S. Cartwright, who until his association with L. W. Prunty a little more than a year ago, was an active oil field supply man.



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Say you saw it in The OIL WEEKLY

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Two New Gas Engines

BESSEMER ENGINE COMPANY

Bessemer Engine Company, of Grove City, Pennsylvania, has just announced two new additions to its line of oil field engines —one a 50 horsepower two-cycle engine, the second a 55-60 horsepower four-cycle engine.

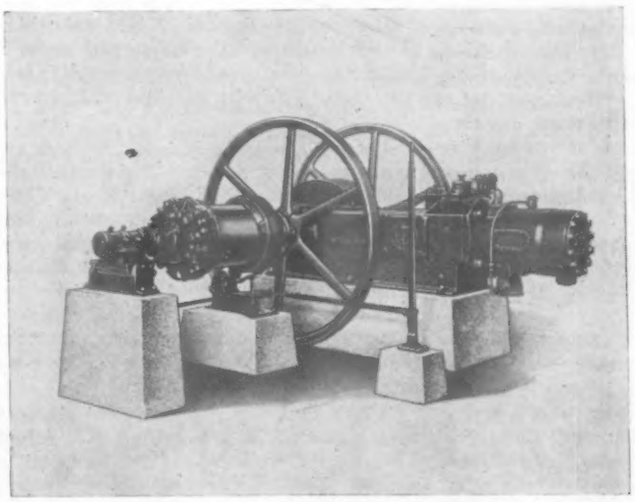
The new 50 horsepower two-cycle power plant embodies all of the characteristic features of the Bessemer Type O. F. line, but in addition this engine can be secured with either Timken roller bearings or with the familiar poured babbitt shell bearings. The bed plate of this new 50 horsepower engine is designed not only to accommodate either type of bearing desired, but is so engineered as to make both types of bearings easily interchangeable in the field.

In its other features this 50 horsepower engine is a duplicate of the Bessemer O. F. line. It has the mixing valve on top of the bed plate; is entirely enclosed; employs combination force feed and splash lubrication; has the improved Bessemer roller bearing governor; is built to provide the quickest and easiest accessibility to all working parts; and is rugged and overstrength in its construction throughout the entire engine.

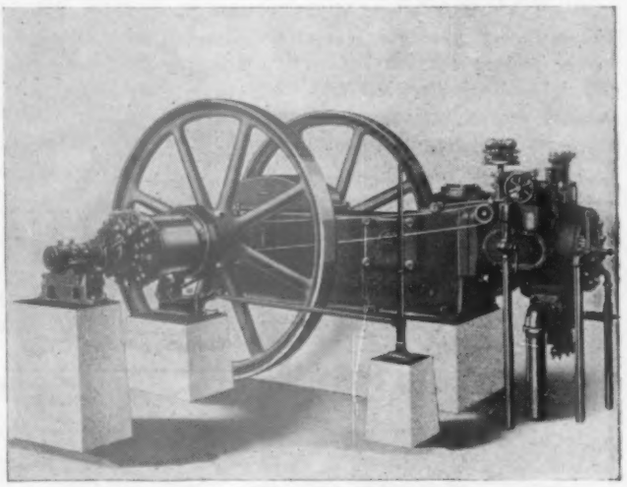
The other new addition to the Bessemer line of oil field power equipment is the new 55-60 horsepower four-cycle oil field engine, embodying all of the advanced engineering features of the smaller horsepower four-cycle Bessemers. These features, with which many oil men are familiar, include enclosed type bed plate with straight line wall construction; nickel-chromium iron-steel cylinders outside bolted to the bed plate with cylinder skirt extending into bed plate extension; oversize, overstrength rods, bearings and bushings; adjustable crosshead; simple valve mechanism consisting of valves mounted in cages on power cylinder, operated by roller bearing lay-shaft driven by spiral gears; improved Bessemer fly-ball, roller bearing governor; and overstrength construction throughout with precision machining on all parts.

The newest development in this larger size engine is the use of Timken roller main bearings when so desired. These engines are built both with roller bearings and with poured babbitt shell bearings, being furnished with either type which may be desired by the purchaser.

Additional information on these engines will be supplied by the Bessemer Engine Company.



40-H. P. Two-Cycle Oil Field Engine



40-H. P. Four-Cycle Engine

Pipe Tongs

GEARENCH MANUFACTURING COMPANY

Gearench Manufacturing Company, Houston, Texas, after thorough field tests, has placed on the market the Petrol Tongs. Incorporating simplicity of design and scientific construction, they make pipe turning easy, and save time.

Having only one handle, Petrol Tongs are especially convenient in difficult places, and are a safeguard against mashing of fingers and other possible injuries to the user. The use of only one handle has also resulted in the tongs being light in weight.

Petrol Tongs may be obtained from supply houses or through the Gearench Sales Corporation, Esperson Building, Houston, Texas.

New Emsco Catalog

Emsco Derrick & Equipment Company, Los Angeles, has just issued and is now distributing a new catalog. While of standard purchasing agents' size, it is in several respects a departure from the conventional.

It is of the loose-leaf type, but practically all the Emsco products are shown and described in separate bound bulletins with attractive green covers, and these in turn are bound in the loose-leaf covers, making a very complete book as well as providing for additions and changes from time to time.

The covers are very artistic, being of heavy leather finish fabrikoid in the Emsco green color, with lettering and embellishments in an alumnium shade to symbolize the galvanized finish of Emsco derricks.

Each separate bulletin is conveniently indexed with tabs extending out beyond the page size, yet within the margin of the covers for protection.

Many single sheet inserts bringing out special features of various Emsco products are included in the front section, as well as a number of multi-colored inserts of such subjects as the Getty well in flames at Santa Fe Springs which has occupied the attention of the California petroleum fraternity for some time.

Copies can be obtained by writing the company at Los Angeles, Houston or Dallas.

The Wagner Electric Corporation of St. Louis, has just issued a new bulletin describing Wagner large RA single phase repulsion-induction motors The bulletin is full of illustrations and detailed description of every part of the motor. Not only is the motor picked to pieces to make clear to motor users what each part of the motor is for, and why it is made that way, but it is also a text book on single phase motors in general, covering such subjects as—type of single phase motors, history of repulsion-induction motors (from the first-hand-cranked motor to the present self-starting, self ventilated type), operating principles (both electrical and mechanical—with torque-speed-current curves and cross sectional diagrams of the motor), sleeve and ball bearing construction (illustrated with cross section diagrams and photos) ventilation, and construction features of stator, end plate, rotor and rocker arm.

This bulletin fills a long-felt need for detailed information on single phase motors, and was written to give motor users that information.

Any one interested in receiving a copy of this bulletin should address Wagner Electric Corporation, St. Louis, Missouri, and ask for Bulletin 157.

The Bristol Company, Waterbury, Connecticutt, has issued a new catalog, Number 1900, featuring Bristol's Long Distance Electric Transmitting and Recording System.

This Is No Ordinary Fish Story

'TWAS a dark and stormy day, and a couple of hardy fishermen, their fishing paraphernalia glistening in the bright sunlight, glided around with their hardy boatman in the open sea four miles off shore in the Gulf of Mexico. The gray, salty water lay motionless in the grip of a dead calm, and the waves were fully 30 feet high, making it impossible to see other craft within a distance of 100 feet, as there were no other boats out there for miles around.

This starts off as if it might be a fish story, but it's really a gripping story of adventure on the sea. If it must finally be classed as a fish story, it will at least have the distinction of being about bigger and gamer fish; for it concerns tarpons and sharks. When gamer fish are hatched, tarpon will lay the eggs. Ask the man who's caught one.

Anyway, now that the setting has been made perfectly clear, and we've seen how the two fishermen and their boatman have put out to sea at Aransas Pass and reached a point four miles from land where the waves were 30 feet high, we will rush on with the story. Honest, the waves were that high. And furthermore, the boat in which the trio had set forth was only 20 feet in length. It was like Winken, Blinken and Nod in their wooden shoe.

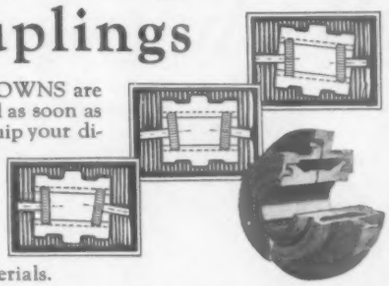
Before going any further, meet the actors in this drama. He with the determined look on his face and the light of hope in his eyes is F. M. "Doc" Seibert, director of research for the Gulf Refining Company at Houston. "Heck no!" he is saying, "We don't want to waste our time on trout and redfish. I came out here for whales and sharks." The big fellow with the mullet in his hand, preparing to bait a hook, is H. A. Daley, lubricating engineer of the same company and city. The other man is their boatman.

Suddenly the director of research hooks a tarpon, and the "big adventure" begins. Catching a tarpon is an altogether different proposition from catching a catfish or a trout, for one that is grown weighs about the same as the man who is trying to land him. The fisherman's line tightened, and the big fish pulled at it desperately. To the right, to the left, in circles, he lunged, and into the air where he could be seen in all the splendor of his big silvery body. But he was wild as the waves in which he bathed, and he tugged at the fishing line as if to take fisherman, boatman and boat for a rapid trans-Atlantic ride. It looked as if the tarpon would get away in spite of the noblest and best efforts of his captor. "Here, take him, Daley," exclaimed the director of research in desperation. "Take him yourself!" was the reply. "You hooked him, and you can take him."

Further complication now. A shark appears on the scene, and decides that the tarpon would make a good meal. "Doc" in his 20-foot boat, riding the 30-foot waves four miles from shore, was determined to land the tarpon; the shark was determined to eat the tarpon; and the tarpon was determined to get away. It was a tight fight with a small boat for two long hours, but the shark finally gave up hope, and the tarpon was landed.

The big, silvery fish measured six feet and eight inches in length, and weighed 146 pounds. It has been mounted and is among "Doc" Seiber's souvenirs. If you don't believe that the fish was caught on his line, he will show you the line.

Stop Replacing Couplings



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Here is a coupling in which fatigue and failure are eliminated forever. No flexible materials are used. No bushings, pins, springs, discs, grids or any other flexible parts are used to compensate for misalignment.

Instead (see diagram above) two spur gears, one on each shaft end, are completely and continuously meshed in oil with the internal gears of a floating sleeve. The shafts and sleeve turn noiselessly as one unit, allowing free angular and lateral movement. No flexible material. Shut-downs for replacements are eliminated forever.

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Anti-Friction Sucker Rod Guide

is made up of two Bakelite sections held in position on the rod by means of two copper bands, attached in a manner that absolutely prevents loosening of either bands or guide.

The core or sleeve of the guide is made of fibre, which absorbs moisture (Bakelite does not) and swells around the rod, thereby holding the guide tight to the rod.

M. & L. Bakelite Sucker Rod Guides weigh only 5 oz. each.

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"MERLONG" Philadelphia

Merrick & Longbottom, Inc.
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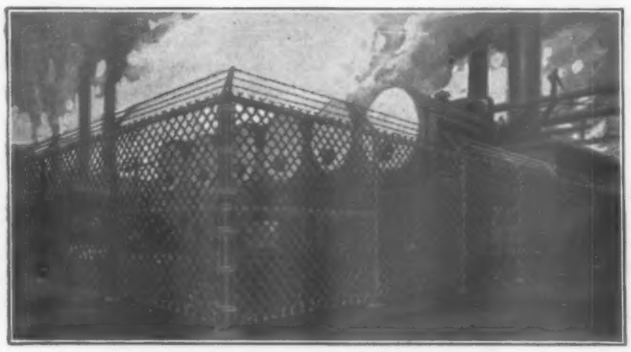
Commonwealth Building
Philadelphia, Penn.



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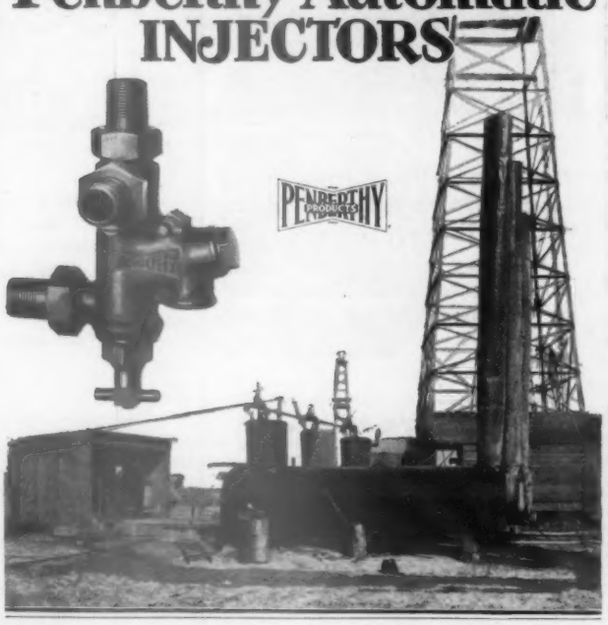

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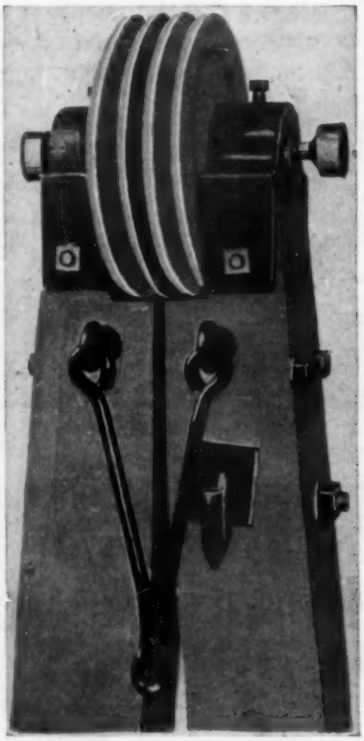
Wishes to announce that the Safety and Eclipse special Pulling Machines (7x10x36 ft. A-Mast) size will be equipped with Double Crown Pulleys, fitted with 2-15/16 Phosfer Bronze Bushings.



The price to remain the same. Safety $375.00. Eclipse $350.00. F. O. B. Factory.

Either the complete Machine or the Stripped Derrick equipped as above.

For complete description write

SAFETY PULLING MACHINE COMPANY

INDEPENDENCE, KANSAS

P. O. BOX 525

SQUEAKS FROM THE BULL WHEEL

A Sunday School teacher was telling the story of Samson to a class of small boys, one of them the six-year-old son of a famous moving-picture director.

"And the cruel Philistines captured Samson. They bound his hands! They bound his feet! They whipped him! They put out his eyes! They made him a slave! They . . . . "

The director's son interrupted: "Well, where the hell were the United States Marines!"

"I hear your son is at college."

"Yep."

"How's he doing?"

"Pretty good I guess, he's taking three courses. I've just paid ten dollars for Latin, ten dollars for Greek and a hundred dollars for Scotch."

On the Golf Course—Lady listening to "gentleman" trying to get out of a "sand trap": "Oh horrors! I never heard such swearing, since I was born."

Gentleman, looking her over carefully, replies: "Well, madam, I don't blame them for cussing when you were born."

"Are you sure you can give my daughter the luxuries to which she is accustomed?"

"I ought to; I'm the one who accumtomed her to them."

A Chinese newspaper contains this letter from an applicant for work:

"Sir—I am Wang . . . . I can drive a typewriter with good noise and my English is great . . . . My last job has left itself from me, for the good reason that the large man has dead. It was on account of no fault of mine. So, honorable sirs, what about it? If I can be of big use to you, I will arrive on some date that you should guess."

Edith and Eunice, sisters, were informed that twin boys had been added to the family circle.

"Well, that's sure a joke on us," Edith commented joyously. "Eunice and I both prayed for a new baby brother, but we thought we were talking about the same one."

The story is told of a Scotch farmer whose wife had after many years outgrown her spectacles and had to hold her reading matter at arms length in order to see the print. One night she was having a particularly hard time reading the newspaper though she was holding it out as far as possible.

"Jock," she exclaimed, "I do wish the next time you go to town you'd buy me a stronger pair of specs."

"Huh," said Jock, ever mindful of expenses, "what you need ain't stronger specs—it's longer arms."

Asking Too Much

"Gentlemen," said the surgeon as he entered the lobby of the Good Egg Club, "in the room next door lies a man hovering between life and death. One thing will save him. It there a gentleman here who will volunteer to give me a quart, just one quart of—"

"That's enough, doc. I'll do it!" cried out an athletic youth.

"But it must be good, you know. It must be pure. I shall have to make a careful examination."

"Sure thing. Step right in here."

They entered an adjoining ante-room and the sturdy man started to remove his coat.

"Here, here—what's the idea?" remanded the doctor.

"Don't you want to examine me?"

"Certainly not. Just let me see the whiskey."

"Whiskey? Well, of all the nerve! Think I'd give up a quart of good whiskey for a guy I never saw in my life? I thought you wanted blood."

Visitor—Is the boss in?

Office Boy—I am very sorry to say that he is not in.

Visitor—Why are you so sorry to say he is not in?

Office Boy—Because it's against my conscience to tell lies.

Out in Wyoming, a train ran over the cow of a Swede farmer named Ole Oleson. The claim adjuster went out to the home of Ole to adjust the claim likely to be made by Ole for the loss of his cow.

"Well, Mr. Oleson," said the claim adjuster, "I came out to see you about your cow being killed on our track. What are you expecting to do about it?"

"Vell," said Ole stoidly, "I ban a poor man, an' I can not do much because I ban so poor; but I will try to pay you five dollars."

"There used to be a fellow in my town," said a delegate to the convention here, "who tried for years and years to beat another chap playing poker. This second chap was no good at playing anything except poker—he was a dead beat, a drunkard, erratic, and frequent in his love affairs, and generally a civic liability, but he could play poker. The first fellow was a good business man, generally speaking, and went to church and loved his family. But he kept on trying to beat this bum until he lost his store, his money, and most of his standing in the community.

" 'I can't understand it,' he said, the day the bank took over his store, 'I don't see why the good Lord lets that fellow win, he's so damned immoral."—*Kansas City Star.*

"How much life insurance does your husband carry?"

"Oh, hardly enough to be worth shooting."

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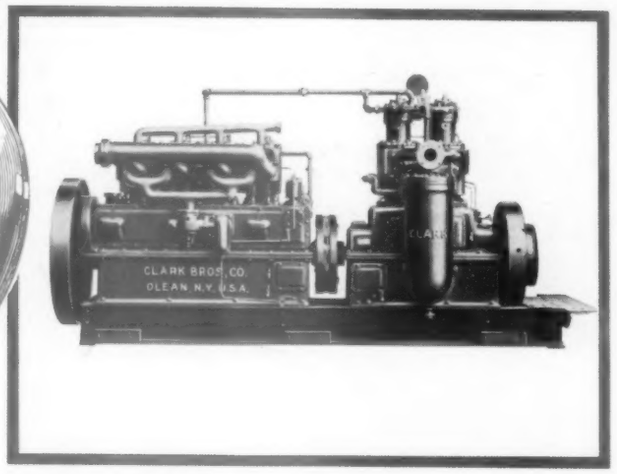
When **time** *is* **vital**

get in quick with



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When you want to test wells for response to air or gas lift—when you want to apply air or gas while the well is headed—whenever time is a vital consideration—remember that the CLARK "Vertical" can be moved in, set on timbers and put into operation *quickly* and at *minimum expense*. It can promptly be moved elsewhere when desired.

The "Vertical" is ruggedly built, fully enclosed, perfectly balanced and readily accessible in all parts—a durable, efficient machine, giving satisfactory performance even in permanent installations. Capacity is 330,000 cu. ft. in 24 hours, at 0 pounds intake to 400 pounds discharge, with starting pressure of 1,000 pounds. The gas engine is 4 cylinder, vertical, 75 H.P. The compressor has 2 vertical cylinders, each 2-stage. Air or friction starters optional.

Our engineers will gladly furnish you with operating data and information. Clark Bros. Company, Olean, N. Y. Branches and Warehouses at 125 W. First St., Tulsa; McCamey and Sweetwater, Texas, and Artesia, N. M. California Branch, Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles, and 50 Fremont St., San Francisco.

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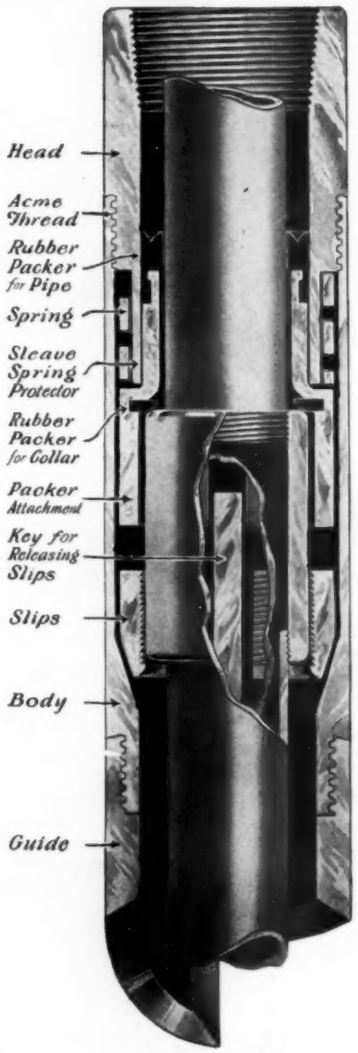
—Instant, positive RELEASE is effected by TWO releasing keys.

—STEEL packer attachments with RUBBER inserts make perfect joint.

—Guides SCREW on.

—Your satisfaction is GUARANTEED by LeBus.



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For fishing after plain pipe, tool joints, or collars it is practically "fool proof" in its operation. The releasing keys are solid to the body, and so constructed that the scientifically heat-treated slips have a full end thrust against the keys at ANY position.

The packer attachment prevents collar or tool joint from passing through the slips; and a shut-off for circulation is effected when collar or joint seats against the rubber insert. Hard rotating to force over the fish cannot possibly foul packer-joint, which seats the tighter under heavy pump pressures.

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